
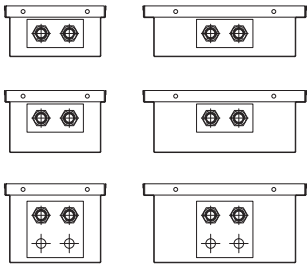

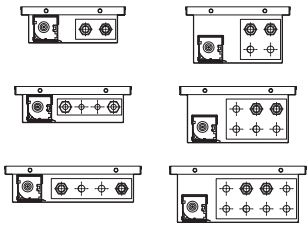

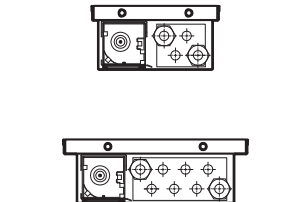

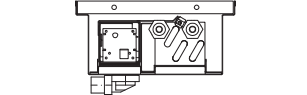

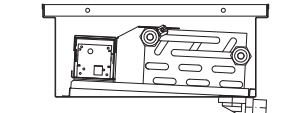


Technical catalogue trench convectors Aquilo

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trench convectors

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		types
	Aquila FMK (no fan) 2 connections height [mm]: 90, 110, 140 width [mm]: 180, 260, 290, 340, 420 overall length [mm]: 1000, 1100, 1200, 1300, 1400, 1500, 1700, 1900, 2100, 2300, 2500, 2700, 2900, 3100, 3300, 3500	
	Aquila F1T (fan version) 2 connections height [mm]: 90, 140 width [mm]: 260, 290, 340 overall length [mm]: 1000, 1100, 1200, 1300, 1400, 1500, 1700, 1900, 2100, 2300, 2500, 2700, 2900, 3100, 3300, 3500	
	Aquila F1P (reinforced fan version) 2 connections height [mm]: 90 width [mm]: 180, 260 overall length [mm]: 1000, 1250, 1500, 1750, 2000, 2250, 2500, 2750, 3000	
	Aquila F2C (heating or cooling) 2 connections height [mm]: 110 width [mm]: 240 overall length [mm]: 600, 1000, 1400, 1800	
	Aquila F4C (heating and cooling) 2 connections - heating system 2 connections - cooling system height [mm]: 140 width [mm]: 340 overall length [mm]: 1250, 2000, 2750	

Aquilo FMK *(no fan)*

Trench convectors Aquilo FMK are especially designed for the in-floor mounting. The heating element is a copper-aluminum heat exchanger, painted black, mounted inside a double-side galvanized steel duct, also painted black from the inside. From the top the convector is protected with a crosswise or lengthwise masking grille made of any material available in the Manufacturer's offer, to be ordered separately. The exchanger's connection to the heating system is executed with two stub pipes with a G ½" internal thread.

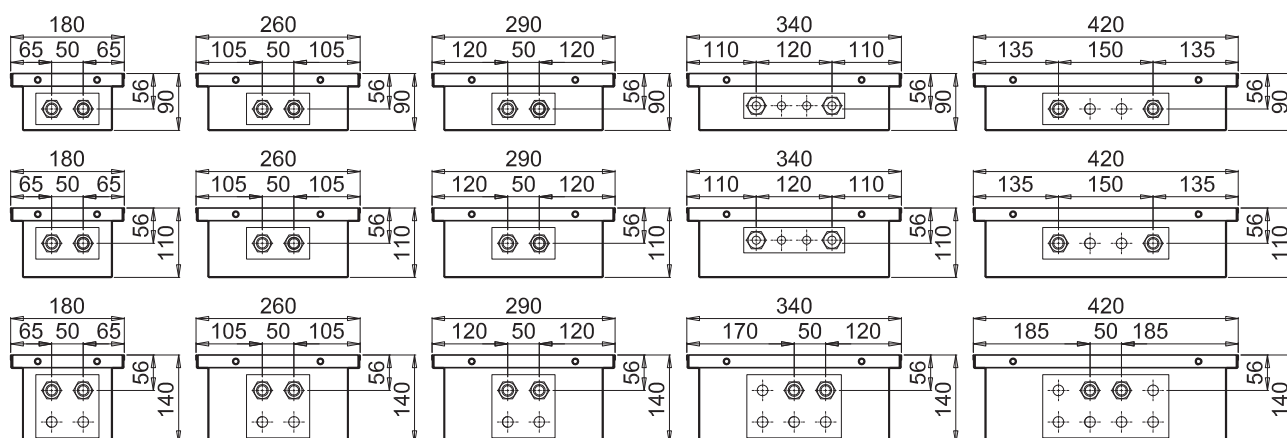
technical specification

- Width : 180, 260, 290, 340, 420 mm
- Length : from 1000 up to 3500 mm
- Height : 90, 110, 140 mm
- Exchanger composition : aluminum finned copper pipes
- Duct composition : as standard double-side galvanized steel sheet, black RAL 9005 dry powder-coated from the inside
option: stainless steel
- Grille material : wood (oak, beech)
duralumin in colors of choice: natural, golden, light brown, dark brown or black
stainless steel
- Connections : 2 x G ½" – internal thread
- Operating pressure : 10 bar
- Max. temperature : 110 °C
- Test pressure : 13 bar



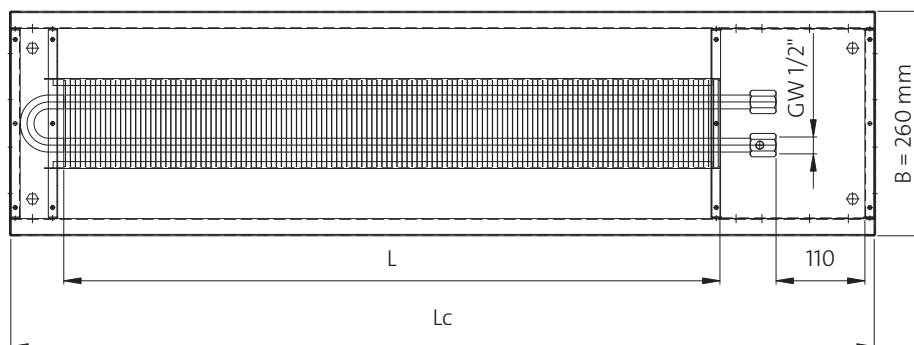
- Exchanger accessories : manual air vent, 2 exchanger side covers, a 10 cm long stainless steel flexible connectors kit with a G ½" thread
- Duct accessories : leveling bolts M8x30 mm with internal hexagon (for the duct length up to 2.5 m – 4 pcs., over 2.5 m – 6 pcs.), 4 surface mounting elements with duct fixing screws, breakable pass for the hydronic heating system connection + 2 rubber passes for domestic electric circuit connection, steel metal sheet cover masking the exchanger connectors, protecting the exchanger and duct against damage or smudging during mounting, as well as protecting the duct against distortion during covering with concrete

side views



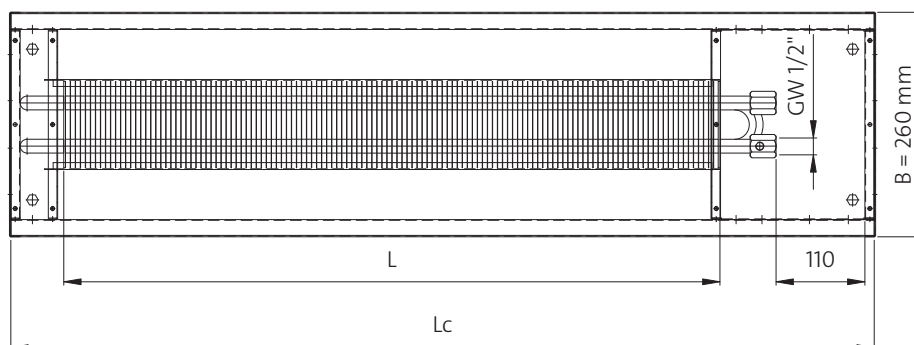
top view - examples

For the heights 90 and 110 mm



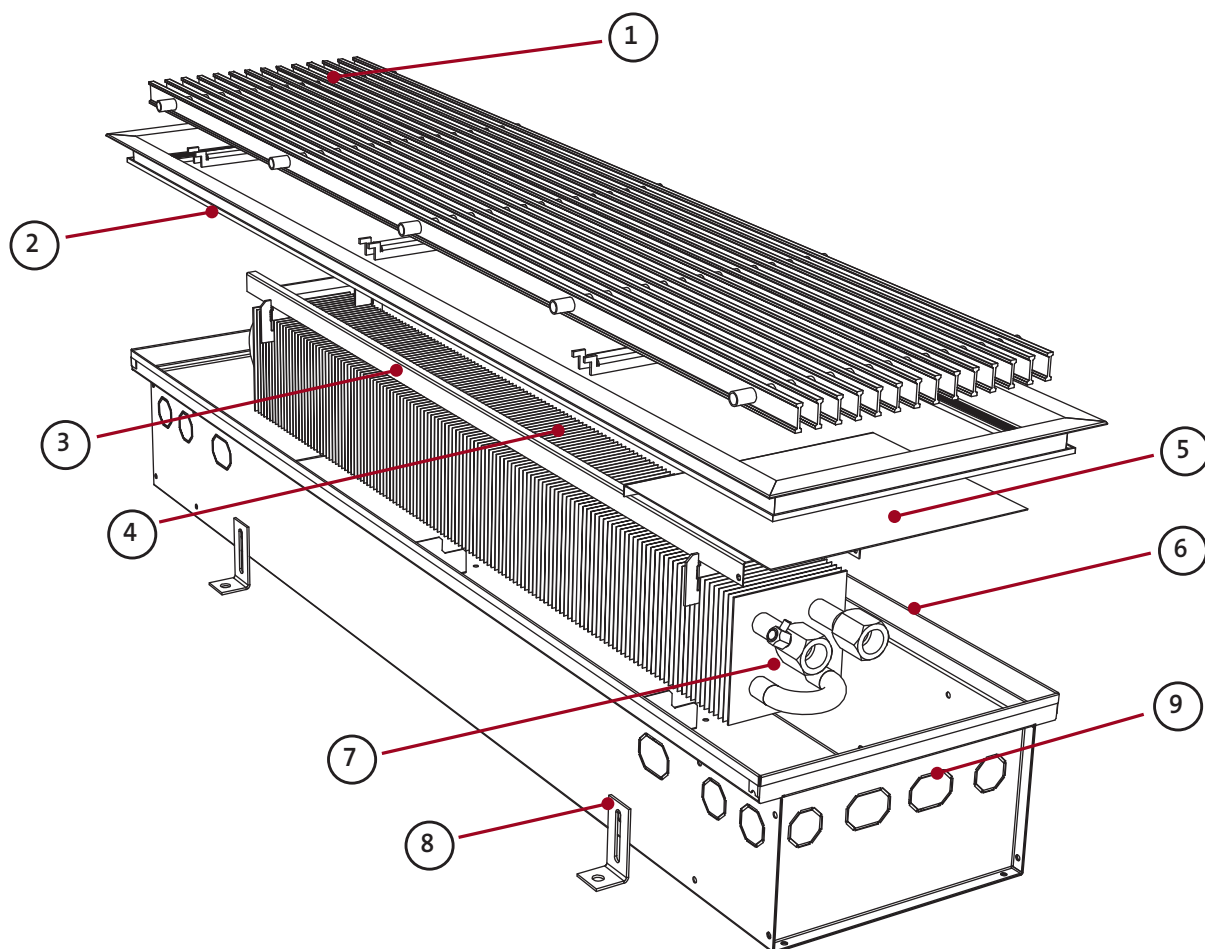
$$L = L_c - 240 \text{ mm}$$

For the height 140 mm



$$L = L_c - 240 \text{ mm}$$

L_c - convector's overall length
 L - exchanger's length
 B - width



1 - Roll-up crosswise grille (beech or oiled oak, raw or varnished, duralumin, stainless steel), or lengthwise grille (duralumin, stainless steel).

Note: lengthwise grilles as shown on the picture require additional reinforced crossbars

2 - Option: L or Z-type finishing frame (only for PML and PMZ grilles). Not applicable for PMO grilles.

Note: Z-type frame is shown on the picture.

3 - Convection metal sheet (for the increased heat efficiency and the safety of use).

4 - Heat exchanger (copper pipes, aluminum fins, overall coated with black varnish).

5 - Metal sheet cover masking the connection to the domestic hydronic heating system.

6 - Convector's duct (double-side galvanized, varnished metal sheet).

7 - Air vent.

8 - Surface mounting elements.

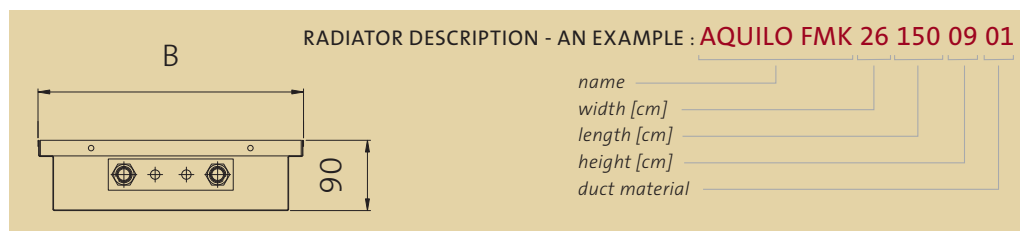
9 - Passes for the hydronic heating system connection (breakable).

weight and water volume

width - B	[mm]	180			260			290			340			420		
height	[mm]	90	110	140	90	110	140	90	110	140	90	110	140	90	110	140
weight	[kg/m]	5.9	6.1	7.8	6.4	6.7	8.4	6.9	7.1	8.8	8.0	8.3	10.8	9.9	10.2	14.1
water volume	[l/m]	0.3	0.3	0.7	0.3	0.3	0.7	0.3	0.3	0.7	0.4	0.4	1.0	0.7	0.7	1.4

Aquilo FMK (no fan) - height 90 mm

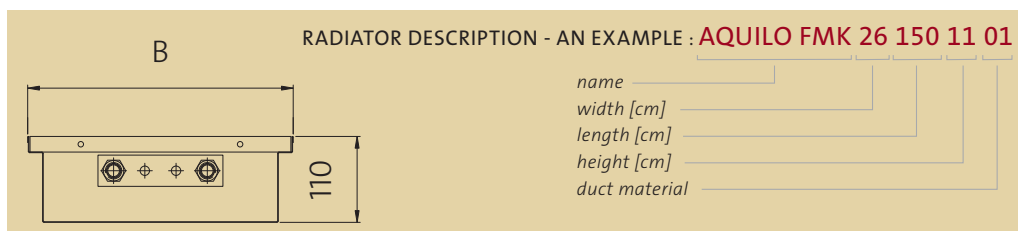
trench convectors



Lc overall length [mm]	parameters $t_z / t_p / t_l$ [°C]	B - width [mm]				
		180	260	290	340	420
1000	75/65/20	173	226	232	299	376
	70/55/20	137	178	183	236	297
	55/45/20	84	110	113	145	183
1100	75/65/20	196	256	263	338	426
	70/55/20	155	202	207	267	336
	55/45/20	95	124	127	164	207
1200	75/65/20	219	285	293	378	476
	70/55/20	173	225	231	298	375
	55/45/20	106	138	142	183	231
1300	75/65/20	242	315	324	417	525
	70/55/20	191	248	255	329	414
	55/45/20	117	153	157	202	255
1400	75/65/20	264	345	354	456	575
	70/55/20	209	272	279	360	453
	55/45/20	128	167	172	221	279
1500	75/65/20	287	374	385	496	624
	70/55/20	227	295	303	391	492
	55/45/20	139	182	187	240	303
1700	75/65/20	333	434	446	574	723
	70/55/20	262	342	351	453	570
	55/45/20	161	210	216	279	351
1900	75/65/20	378	493	507	653	822
	70/55/20	298	389	400	515	648
	55/45/20	184	239	246	317	399
2100	75/65/20	424	553	568	732	921
	70/55/20	334	436	448	577	727
	55/45/20	206	268	275	355	447
2300	75/65/20	470	612	629	810	1020
	70/55/20	370	483	496	639	805
	55/45/20	228	297	305	393	495
2500	75/65/20	515	672	690	889	1120
	70/55/20	406	530	544	701	883
	55/45/20	250	326	335	431	543
2700	75/65/20	561	731	751	968	1219
	70/55/20	442	576	592	763	961
	55/45/20	272	355	364	469	591
2900	75/65/20	606	790	812	1046	1318
	70/55/20	478	623	640	825	1039
	55/45/20	294	383	394	508	639
3100	75/65/20	652	850	873	1125	1417
	70/55/20	514	670	688	887	1117
	55/45/20	316	412	423	546	687
3300	75/65/20	698	909	934	1204	1516
	70/55/20	550	717	737	949	1195
	55/45/20	338	441	453	584	735
3500	75/65/20	743	969	995	1282	1615
	70/55/20	586	764	785	1011	1273
	55/45/20	360	470	483	622	783

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C.

All Aquilo convectors available on request.



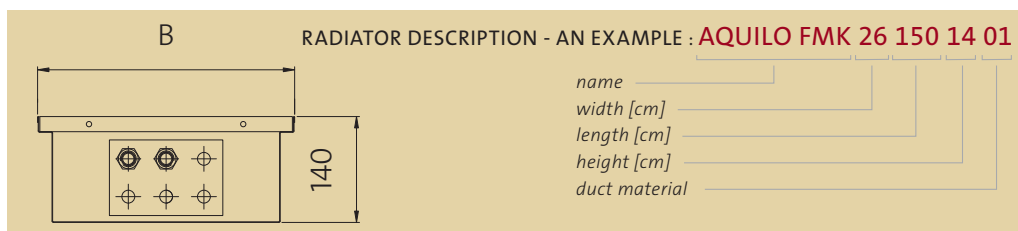
Lc overall length [mm]	parameters $t_z / t_p / t_l$ [°C]	B - width [mm]				
		180	260	290	340	420
1000	75/65/20	199	266	296	353	432
	70/55/20	157	210	233	278	341
	55/45/20	97	129	144	171	210
1100	75/65/20	225	301	335	399	489
	70/55/20	178	238	264	315	386
	55/45/20	109	146	162	194	237
1200	75/65/20	251	336	374	446	546
	70/55/20	198	265	295	352	431
	55/45/20	122	163	181	216	265
1300	75/65/20	278	371	413	492	603
	70/55/20	219	293	326	388	476
	55/45/20	135	180	200	239	293
1400	75/65/20	304	406	452	539	660
	70/55/20	240	320	356	425	521
	55/45/20	147	197	219	261	320
1500	75/65/20	330	441	491	585	717
	70/55/20	260	348	387	461	565
	55/45/20	160	214	238	284	348
1700	75/65/20	382	512	569	678	831
	70/55/20	301	403	448	535	655
	55/45/20	185	248	276	329	403
1900	75/65/20	435	582	647	771	945
	70/55/20	343	459	510	608	745
	55/45/20	211	282	314	374	458
2100	75/65/20	487	652	724	864	1058
	70/55/20	384	514	571	681	835
	55/45/20	236	316	351	419	513
2300	75/65/20	539	722	802	957	1172
	70/55/20	425	569	633	754	924
	55/45/20	262	350	389	464	569
2500	75/65/20	592	792	880	1049	1286
	70/55/20	467	624	694	828	1014
	55/45/20	287	384	427	509	624
2700	75/65/20	644	862	958	1142	1400
	70/55/20	508	680	756	901	1104
	55/45/20	312	418	465	554	679
2900	75/65/20	697	932	1036	1235	1514
	70/55/20	549	735	817	974	1194
	55/45/20	338	452	502	599	734
3100	75/65/20	749	1002	1114	1328	1628
	70/55/20	591	790	878	1047	1283
	55/45/20	363	486	540	644	789
3300	75/65/20	801	1072	1192	1421	1741
	70/55/20	632	845	940	1120	1373
	55/45/20	389	520	578	689	845
3500	75/65/20	854	1142	1270	1514	1855
	70/55/20	673	901	1001	1194	1463
	55/45/20	414	554	616	734	900

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C.

All Aquilo convectors available on request.

Aquilo FMK (no fan) - height 140 mm

trench convectors



Lc overall length [mm]	parameters $t_z / t_p / t_l$ [°C]	B - width [mm]				
		180	260	290	340	420
1000	75/65/20	219	328	361	457	537
	70/55/20	173	259	285	360	423
	55/45/20	106	159	175	221	260
1100	75/65/20	248	371	408	517	607
	70/55/20	195	293	322	407	479
	55/45/20	120	180	198	251	295
1200	75/65/20	277	414	456	577	678
	70/55/20	218	327	360	455	535
	55/45/20	134	201	221	280	329
1300	75/65/20	305	458	503	637	749
	70/55/20	241	361	397	502	590
	55/45/20	148	222	244	309	363
1400	75/65/20	334	501	551	697	819
	70/55/20	264	395	434	550	646
	55/45/20	162	243	267	338	397
1500	75/65/20	363	544	598	757	890
	70/55/20	286	429	472	597	702
	55/45/20	176	264	290	367	432
1700	75/65/20	421	630	693	877	1031
	70/55/20	332	497	547	692	813
	55/45/20	204	306	336	425	500
1900	75/65/20	478	717	788	997	1172
	70/55/20	377	565	622	787	924
	55/45/20	232	348	382	484	569
2100	75/65/20	536	803	883	1118	1313
	70/55/20	423	633	697	881	1036
	55/45/20	260	389	428	542	637
2300	75/65/20	594	889	978	1238	1455
	70/55/20	468	701	771	976	1147
	55/45/20	288	431	474	600	706
2500	75/65/20	651	976	1073	1358	1596
	70/55/20	514	769	846	1071	1258
	55/45/20	316	473	521	659	774
2700	75/65/20	709	1062	1168	1478	1737
	70/55/20	559	837	921	1166	1370
	55/45/20	344	515	567	717	843
2900	75/65/20	767	1148	1263	1598	1878
	70/55/20	604	906	996	1260	1481
	55/45/20	372	557	613	775	911
3100	75/65/20	824	1235	1358	1719	2020
	70/55/20	650	974	1071	1355	1593
	55/45/20	400	599	659	833	980
3300	75/65/20	882	1321	1453	1839	2161
	70/55/20	695	1042	1146	1450	1704
	55/45/20	428	641	705	892	1048
3500	75/65/20	939	1407	1548	1959	2302
	70/55/20	741	1110	1221	1545	1815
	55/45/20	456	683	751	950	1116

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C.

All Aquilo convectors available on request.

Aquila F1T *(fan version)*

Trench convectors Aquilo F1T are especially designed for the in-floor mounting. The heating element is a copper-aluminum heat exchanger, painted black, mounted inside a double-side galvanized steel duct, also painted black from the inside. Aquilo F1T convectors are additionally equipped with noiseless centrifugal fans mounted inside the duct, by the exchanger, whose number depends on the exchanger's length, providing the enforced air circulation and – with it – adequately higher heat output of the convector. The fans are driven with 12 V motors. From the top the convector is protected with a crosswise masking grille made of any material available in the Manufacturer's offer, to be ordered separately. The exchanger's connection to the heating system is executed with two stub pipes with a G ½" internal thread. Obligatory electrical accessories, to be ordered separately, constitute a properly selected transformer (for surface or flush mounting), as well as a surface-mounted thermostat for the fan's rotation regulation.

technical specification

- Width : 260, 290, 340 mm
- Length : from 1000 up to 3500 mm
- Height : 90, 140 mm
- Exchanger composition : aluminum finned copper pipes
- Duct composition : as standard double-side galvanized steel sheet, black RAL 9005 dry powder-coated from the inside
option: stainless steel
- Grille material : wood (oak, beech)
duralumin in colors of choice: natural, golden, light brown, dark brown or black
stainless steel
- Connections : 2 x G ½" – internal thread
- Operating pressure : 10 bar
- Max. temperature : 110 °C
- Test pressure : 13 bar

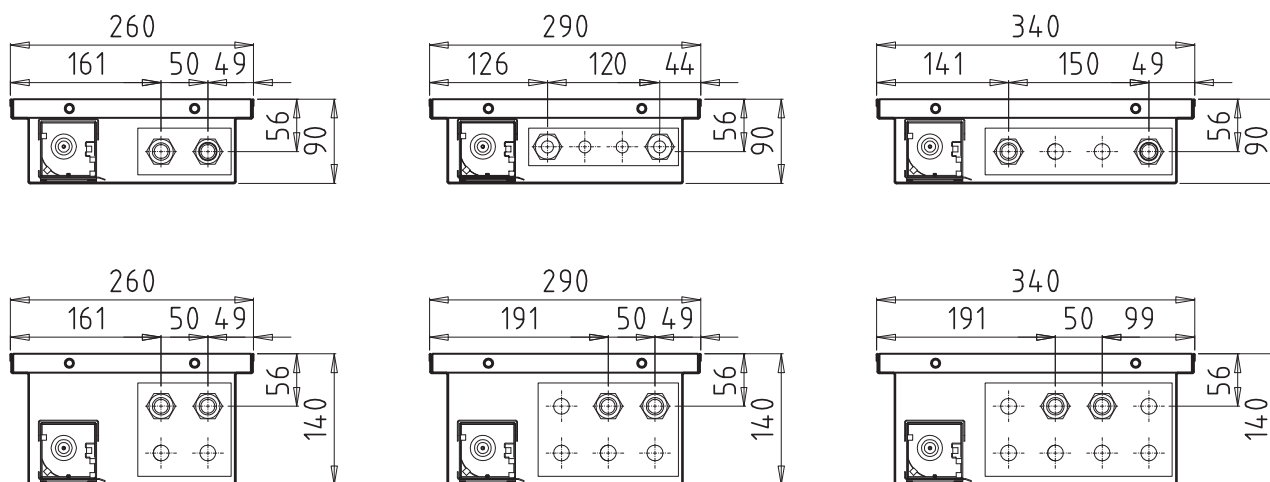


- Exchanger accessories : manual air vent, a 10 cm long stainless steel flexible connectors kit with a G ½" thread
- Duct accessories : leveling bolts M8x30 mm with internal hexagon (for the duct length up to 2.5 m – 4 pcs., over 2.5 m – 6 pcs.), 4 surface mounting elements with duct fixing screws, breakable pass for the hydronic heating system connection + 2 rubber passes for domestic electric circuit connection, steel metal sheet cover masking the exchanger connectors, chipboard protecting the exchanger and duct against damage or smudging during mounting, as well as protecting the duct against distortion during covering with concrete
- Standard electrical accessories : 1 or 2 modules with centrifugal fans driven with 12 V/50 Hz motors (the number of the fans in a single module depends on the convector's length). Every single module incorporates one motor
- Obligatory additional electrical accessories : PAT transformer (~230/12 V) appropriate to the convector's - or the group of convectors – size, depending on the number of connected motors, together with a manual switch, or a room thermostat with a manual or automatic rotation switch, to regulate the convector's heat output via a three-level setting of the fan's rotation (the remote-controlled thermostat available)

NOTE:

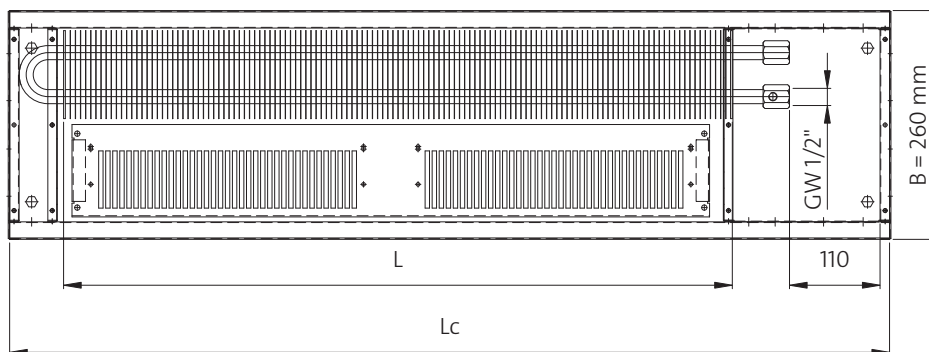
It is strictly forbidden to power the F1T convector directly from the ~230 V electric circuit. The application of an adequate PAT transformer is a must.

side views



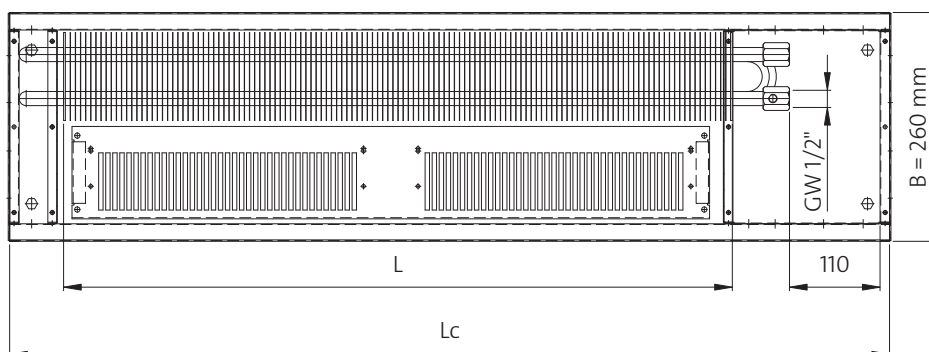
top view - examples

For the height 90 mm



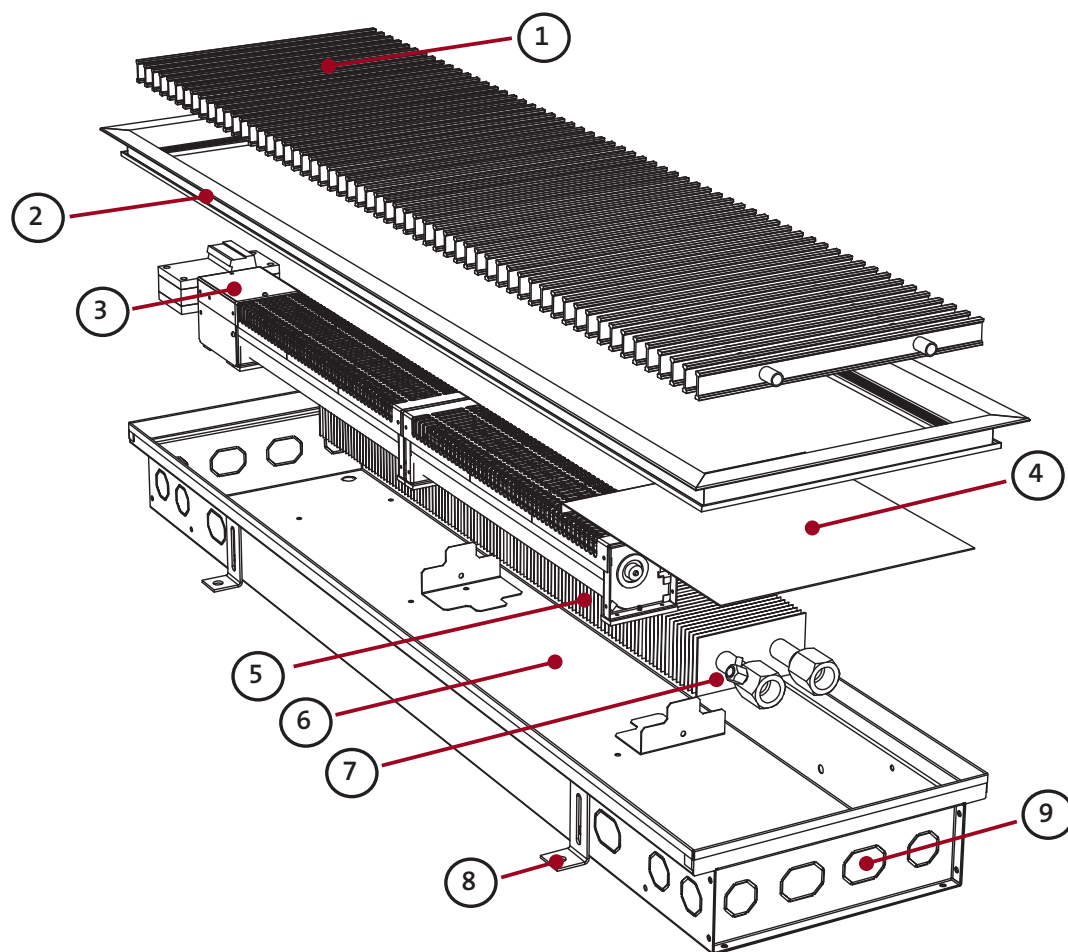
$$L = L_c - 240 \text{ mm}$$

For the height 140 mm



$$L = L_c - 240 \text{ mm}$$

L_c - convector's overall length
 L - exchanger's length
 B - width



- 1 - Roll-up crosswise grille (beech or oiled oak, raw or varnished, duralumin, stainless steel).
- 2 - Option: L or Z-type finishing frame (only for PML and PMZ grilles). Not applicable for PMO grilles.
Note: Z-type frame is shown on the picture.
- 3 - Centrifugal fans' module, driven with a 12 V motor.
- 4 - Metal sheet cover masking the connection to the domestic hydronic heating system.

- 5 - Heat exchanger (copper pipes, aluminum fins, overall coated with black varnish).
- 6 - Convector's duct (double-side galvanized, varnished metal sheet).
- 7 - Air vent.
- 8 - Surface mounting elements.
- 9 - Passes for the hydronic heating system connection (breakable).

weight and water volume

width - B	[mm]	260		290		340	
height	[mm]	90	140	90	140	90	140
weight	[kg/m]	7.8	9.7	8.7	11.2	10.1	13.9
water volume	[l/m]	0.3	0.7	0.4	1.0	0.7	1.4

electric power

overall length Lc	[mm]	1000 - 1900	2000 - 3500
number of motors	[-]	1	2
electric power	[W]	11	22

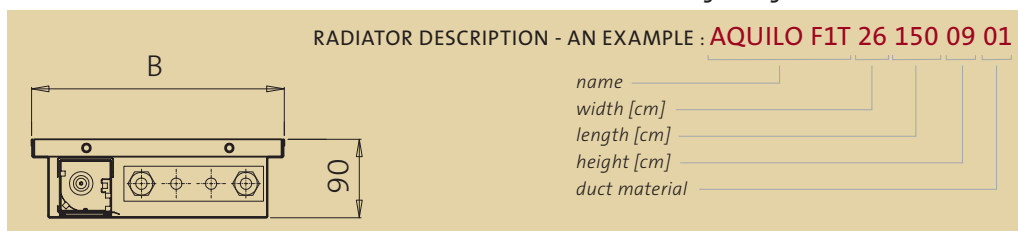
sound intensity Lp(A), as measured in the distance 1 m from the convector

overall length Lc	[mm]	1000 - 1400	1500 - 1900	2000 - 2250	2300 - 2700	2750 - 3500
number of fans	[-]	2	3	4	5	6
fan's 3 rd rotation setting	dB(A)	28.2	29.0	29.7	30.3	30.9
fan's 2 nd rotation setting	dB(A)	26.6	27.4	28.1	28.7	29.3
fan's 1 st rotation setting	dB(A)	18.1	18.9	19.6	20.2	20.8

Aquilo F1T (fan version) - height 90 mm

trench convectors

Note: do not use the lengthwise grilles with the F1T convectors!

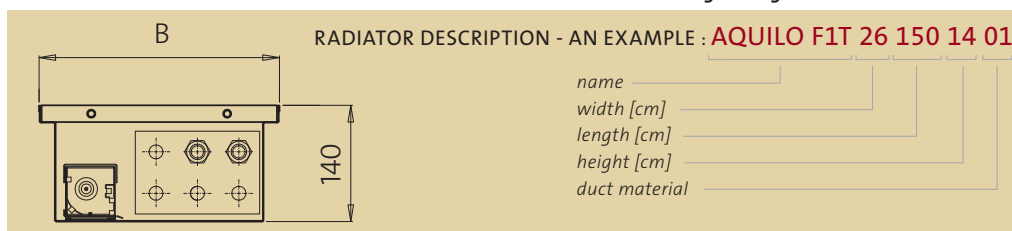


Lc overall length [mm]	parameters t _z / t _p / t _i [°C]	B - width [mm]			number of motors	transform- er's type	electric output [W]
		260	290	340			
1000	75/65/20 70/55/20 55/45/20	837 700 486	1089 911 633	1275 1067 741	1	PAT-01	11
1100	75/65/20 70/55/20 55/45/20	947 793 550	1233 1031 716	1443 1208 839	1		11
1200	75/65/20 70/55/20 55/45/20	1112 931 646	1376 1151 800	1695 1419 985	1		11
1300	75/65/20 70/55/20 55/45/20	1167 977 679	1519 1271 883	1779 1489 1034	1		11
1400	75/65/20 70/55/20 55/45/20	1223 1023 711	1591 1331 925	1863 1559 1083	1		11
1500	75/65/20 70/55/20 55/45/20	1388 1161 807	1806 1511 1050	2114 1769 1229	1		11
1700	75/65/20 70/55/20 55/45/20	1608 1346 935	2093 1751 1216	2450 2050 1424	1		11
1900	75/65/20 70/55/20 55/45/20	1718 1438 999	2236 1871 1299	2618 2191 1521	1		11
2100	75/65/20 70/55/20 55/45/20	2049 1714 1191	2666 2231 1549	3121 2612 1814	2		22
2300	75/65/20 70/55/20 55/45/20	2159 1806 1255	2809 2351 1633	3289 2752 1912	2		22
2500	75/65/20 70/55/20 55/45/20	2489 2083 1447	3239 2710 1882	3793 3174 2204	2		22
2700	75/65/20 70/55/20 55/45/20	2709 2267 1575	3526 2950 2049	4128 3455 2399	2		22
2900	75/65/20 70/55/20 55/45/20	2820 2359 1639	3669 3070 2132	4296 3595 2497	2		22
3100	75/65/20 70/55/20 55/45/20	3040 2544 1767	3956 3310 2299	4632 3876 2692	2		22
3300	75/65/20 70/55/20 55/45/20	3260 2728 1895	4242 3550 2466	4967 4157 2887	2		22
3500	75/65/20 70/55/20 55/45/20	3480 2912 2023	4529 3790 2632	5303 4438 3082	2		22

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C, listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 24%, and for the 3rd setting – increased with 26% compared to the values given in the table above.

All Aquilo convectors available on request.

Note: do not use the lengthwise grilles with the F1T convectors!



Lc overall length [mm]	parameters $t_z / t_p / t_f$ [°C]	B - width [mm]			number of motors	transformer's type	electric output [W]
		260	290	340			
1000	75/65/20 70/55/20 55/45/20	1225 1025 712	1604 1342 932	1815 1519 1055	1	PAT-01	11
1100	75/65/20 70/55/20 55/45/20	1386 1160 805	1815 1519 1055	2054 1719 1194	1		11
1200	75/65/20 70/55/20 55/45/20	1627 1362 946	2131 1784 1239	2413 2019 1402	1		11
1300	75/65/20 70/55/20 55/45/20	1708 1429 993	2237 1872 1300	2532 2119 1472	1		11
1400	75/65/20 70/55/20 55/45/20	1789 1497 1039	2343 1960 1362	2651 2219 1541	1		11
1500	75/65/20 70/55/20 55/45/20	2030 1699 1180	2659 2225 1546	3010 2518 1749	1		11
1700	75/65/20 70/55/20 55/45/20	2352 1969 1367	3082 2579 1791	3487 2918 2027	1		11
1900	75/65/20 70/55/20 55/45/20	2514 2103 1461	3293 2755 1914	3726 3118 2166	1		11
2100	75/65/20 70/55/20 55/45/20	2997 2508 1742	3926 3285 2282	4443 3718 2582	2		22
2300	75/65/20 70/55/20 55/45/20	3158 2643 1835	4137 3462 2404	4682 3918 2721	2		22
2500	75/65/20 70/55/20 55/45/20	3642 3047 2116	4770 3992 2772	5398 4517 3137	2		22
2700	75/65/20 70/55/20 55/45/20	3964 3317 2304	5192 4345 3018	5876 4917 3415	2		22
2900	75/65/20 70/55/20 55/45/20	4125 3452 2397	5403 4521 3140	6115 5117 3554	2		22
3100	75/65/20 70/55/20 55/45/20	4447 3721 2585	5825 4875 3386	6593 5517 3831	2		22
3300	75/65/20 70/55/20 55/45/20	4769 3991 2772	6247 5228 3631	7070 5916 4109	2		22
3500	75/65/20 70/55/20 55/45/20	5092 4261 2959	6670 5581 3876	7548 6316 4387	2		22

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C, listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 24%, and for the 3rd setting – increased with 26% compared to the values given in the table above.

All Aquilo convectors available on request.

example of the built-in convector with the aluminum PMO grille



examples of execution



Aquila F1P *(reinforced fan version)*

Trench convectors Aquilo F1P are especially designed for the in-floor mounting. The heating element is a copper-aluminum heat exchanger, painted black, mounted inside a double-side galvanized steel duct, also painted black from the inside. Aquilo F1P convectors are additionally equipped with noiseless centrifugal fans mounted inside the duct, by the exchanger, whose number depends on the exchanger's length, providing the enforced air circulation and – with it – adequately higher heat output of the convector. The fans are driven with 12 V motors. From the top the convector is protected with a crosswise masking grille made of any material available in the Manufacturer's offer, to be ordered separately. The exchanger's connection to the heating system is executed with two stub pipes with a G ½" internal thread. Obligatory electrical accessories, to be ordered separately, constitute a properly selected transformer (for surface or flush mounting), as well as a surface-mounted thermostat for the fan's rotation regulation.

technical specification

- Width : 180, 260 mm
- Length : from 1000 up to 3000 mm
- Height : 90 mm
- Exchanger composition : aluminum finned copper pipes
- Duct composition : as standard double-side galvanized steel sheet, black RAL 9005 dry powder-coated from the inside
option: stainless steel
- Grille material : wood (oak, beech)
duralumin in colors of choice: natural, golden, light brown, dark brown or black
stainless steel
- Connections : 2 x G ½" – internal thread
- Operating pressure : 10 bar
- Max. temperature : 110 °C
- Test pressure : 13 bar



- Exchanger accessories :
manual air vent, a 10 cm long stainless steel flexible connectors kit with a G ½" thread
- Duct accessories :
leveling bolts M8x30 mm with internal hexagon (for the duct length up to 2.5 m – 4 pcs., over 2.5 m – 6 pcs.), 4 surface mounting elements with duct fixing screws, breakable pass for the hydronic heating system connection + 2 rubber passes for domestic electric circuit connection, steel metal sheet cover masking the exchanger connectors, chipboard protecting the exchanger and duct against damage or smudging during mounting, as well as protecting the duct against distortion during covering with concrete
- Standard electrical accessories :
1 or 2 modules with centrifugal fans driven with 12 V/50 Hz motors (the number of the fans in a single module depends on the convector's length). Every single module incorporates one motor
- Obligatory additional electrical accessories :
PAT transformer (~230/12 V) appropriate to the convector's - or the group of convectors – size, depending on the number of connected motors, together with a manual switch, or a room thermostat with a manual or automatic rotation switch, to regulate the convector's heat output via a three-level setting of the fan's rotation (the remote-controlled thermostat available)

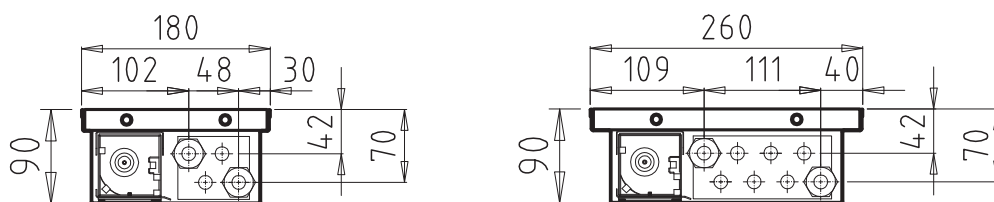
NOTE:

It is strictly forbidden to power the F1P convector directly from the ~230 V electric circuit. The application of an adequate PAT transformer is a must.

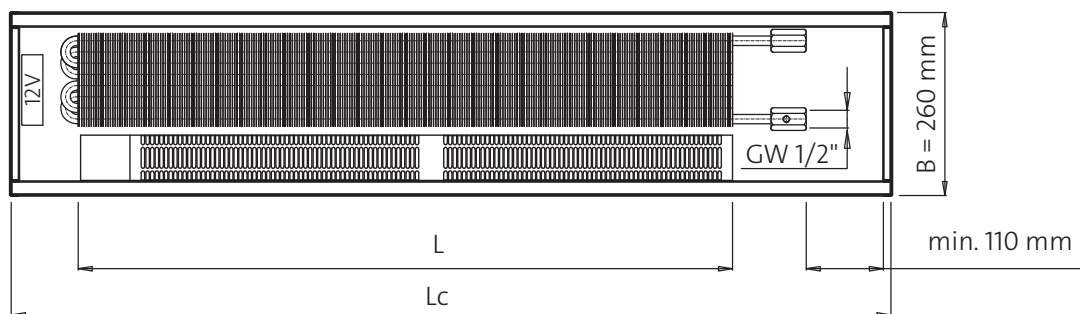
Aquilo F1P *(reinforced fan version)*

trench convectors

side views



top view - an example



$$L = Lc - 320 \text{ mm}$$

Lc - convector's overall length
L - exchanger's length
B - width

weight and water volume

width - B	[mm]	180	260
height	[mm]	90	
weight	[kg/m]	7.2	9.0
water volume	[l/m]	0.4	0.7

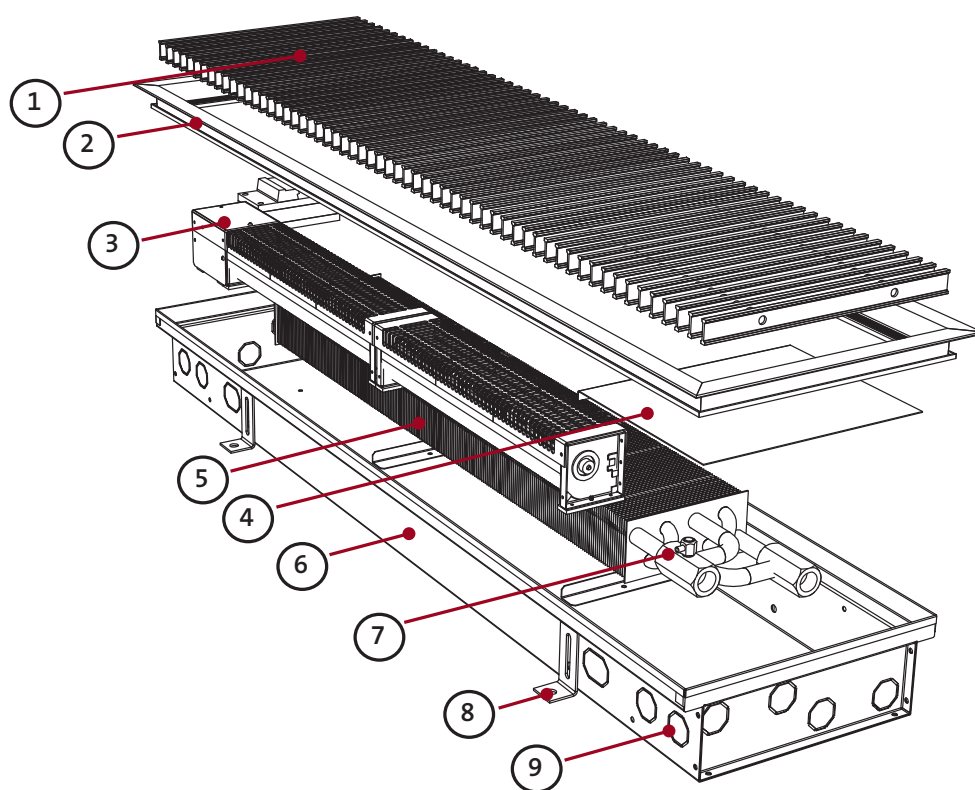
electric power

overall length Lc	[mm]	1000 - 1900	2000 - 3500
number of motors	[-]	1	2
electric power	[W]	11	22

sound intensity Lp(A), as measured in the distance 1 m from the convector

overall length Lc	[mm]	1000 - 1400	1500 - 1900	2000 - 2250	2300 - 2700	2750 - 3500
number of fans	[-]	2	3	4	5	6
fan's 3 rd rotation setting	dB(A)	28.2	29.0	29.7	30.3	30.9
fan's 2 nd rotation setting	dB(A)	26.6	27.4	28.1	28.7	29.3
fan's 1 st rotation setting	dB(A)	18.1	18.9	19.6	20.2	20.8

example of the built-in convector with the aluminum PMO grille



- 1 - Roll-up crosswise grille (beech or oiled oak, raw or varnished, duralumin, stainless steel).
- 2 - Option: L or Z-type finishing frame (only for PML and PMZ grilles). Not applicable for PMO grilles.
Note: Z-type frame is shown on the picture.
- 3 - Centrifugal fans' module, driven with a 12 V motor.
- 4 - Metal sheet cover masking the connection to the domestic hydronic heating system.

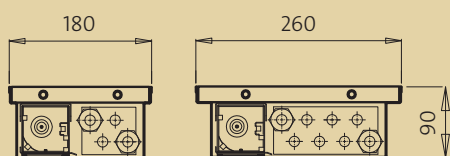
- 5 - Heat exchanger (copper pipes, aluminum fins, overall coated with black varnish).
- 6 - Convector's duct (double-side galvanized, varnished metal sheet).
- 7 - Air vent.
- 8 - Surface mounting elements.
- 9 - Passes for the hydronic heating system connection (breakable).

Aquilo F1P *(reinforced fan version) height 90 mm*

trench convectors

Note: do not use the lengthwise grilles with the F1P convectors!

RADIATOR DESCRIPTION - AN EXAMPLE : **AQUILO F1P 26 150 09 01**



name _____
width [cm] _____
length [cm] _____
height [cm] _____
duct material _____



Lc overall length [mm]	parameters t _z / t _p / t _i [°C]	B - width [mm]		number of motors	transform- er's type	electric power [W]
		180	260			
1000	75/65/20	823	1205	1	PAT-01	11
	70/55/20	688	1008			
	55/45/20	478	700			
1250	75/65/20	1125	1648	1		11
	70/55/20	942	1379			
	55/45/20	654	958			
1500	75/65/20	1428	2091	1		11
	70/55/20	1195	1750			
	55/45/20	830	1215			
1750	75/65/20	1730	2534	1	11	
	70/55/20	1448	2121			
	55/45/20	1006	1473			
2000	75/65/20	2033	2977	2	22	
	70/55/20	1701	2491			
	55/45/20	1181	1730			
2250	75/65/20	2335	3420	2	22	
	70/55/20	1954	2862			
	55/45/20	1357	1988			
2500	75/65/20	2638	3863	2	22	
	70/55/20	2207	3233			
	55/45/20	1533	2245			
2750	75/65/20	2940	4306	2	22	
	70/55/20	2460	3603			
	55/45/20	1709	2503			
3000	75/65/20	3243	4749	2	22	
	70/55/20	2713	3974			
	55/45/20	1885	2760			

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C, listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 24%, and for the 3rd setting – increased with 26% compared to the values given in the table above.

All Aquilo convectors available on request.

Aquila F2C *(heating or cooling)*

Trench convectors Aquilo F2C are especially designed for the in-floor mounting, and can be used for either heating or cooling. The heating or cooling element is a copper-aluminum heat exchanger, painted black, mounted inside a duct made of stainless steel in natural colour. Aquilo F2C convectors are equipped with noiseless centrifugal fans mounted inside the duct, by the exchanger, whose number depends on the exchanger's length, providing the enforced air circulation and – with it – adequately higher heating or cooling efficiency of the convector. The fans are driven with 12 V motors. From the top the convector is protected with a crosswise masking grille made of any material available in the Manufacturer's offer, to be ordered separately. The exchanger's connection to the double-pipe heating system is executed with two stub pipes with a G ½" internal thread. Obligatory electrical accessories, to be ordered separately, constitute a properly selected transformer (for surface or flush mounting), as well as a surface-mounted thermostat for the fan's rotation regulation.

technical specification

- Width : 240 mm
- Length : 600, 1000, 1400, 1800 mm
- Height : 110 mm
- Exchanger composition : aluminum finned copper pipes
- Duct material : standard version: stainless steel in natural colour
Note: for swimming pools applications special version have to be ordered!!!
- Grille material : wood (oak, beech), stainless steel
duralumin in colors of choice: natural, golden, light brown, dark brown or black
Note: only duralumin grilles can be used in case of cooling mode selection
- Connections : 2 x G ½" – internal thread
- Operating pressure : 10 bar
- Max. temperature : 110 °C
- Test pressure : 13 bar



- Exchanger accessories : manual air vent, a 10 cm long stainless steel flexible connectors kit with a G ½" thread
- Duct accessories : leveling bolts M8x30 mm with internal hexagon (for the duct length up to 2.5 m – 4 pcs., over 2.5 m – 6 pcs.), 4 surface mounting elements with duct fixing screws, breakable pass for the hydronic heating or cooling system connection + 2 rubber passes for domestic electric circuit connection, steel metal sheet cover masking the exchanger connectors, chipboard protecting the exchanger and duct against damage or smudging during mounting, as well as protecting the duct against distortion during covering with concrete, duct drainage
- Standard electrical accessories : 1 module with centrifugal fans driven with 12 V/50 Hz motors (the number of the fans in a single module depends on the convector's length). Every single module incorporates one motor
- Obligatory additional electrical accessories: PAT transformer (~230/12 V) appropriate to the convector's - or the group of convectors – size, depending on the number of connected motors, together with a manual switch, or a room thermostat with a manual or automatic rotation switch, to regulate the convector's heating or cooling efficiency via a three-level setting of the fan's rotation (the remote-controlled thermostat available).

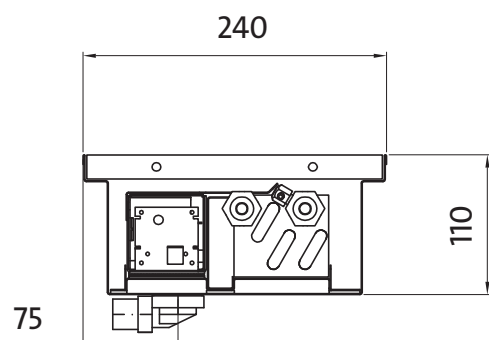
NOTE:

It is strictly forbidden to power the F2C convector directly from the ~230 V electric circuit. The application of an adequate PAT transformer is a must.

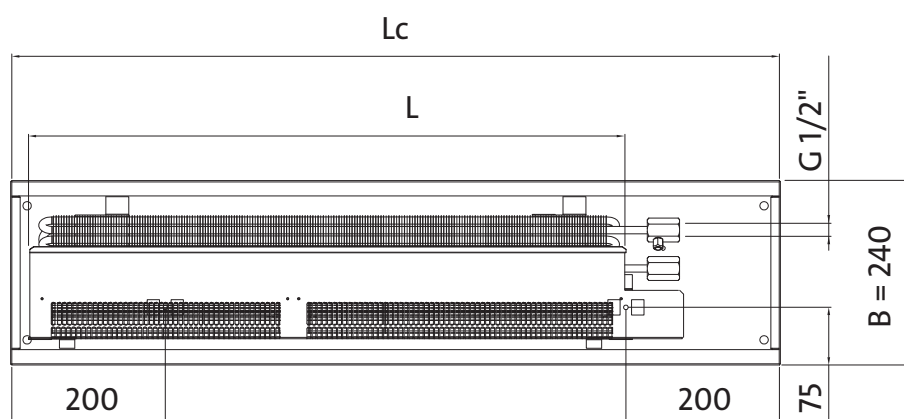
Aquilo F2C *(heating or cooling)*

trench convectors

side view



top view



Lc - convector's overall length
L - exchanger's length
B - width

$$L = Lc - 280 \text{ mm}$$

weight and water volume

width - B	[mm]	240
height	[mm]	110
weight	[kg/m]	10.5
water volume	[l/m]	0.3

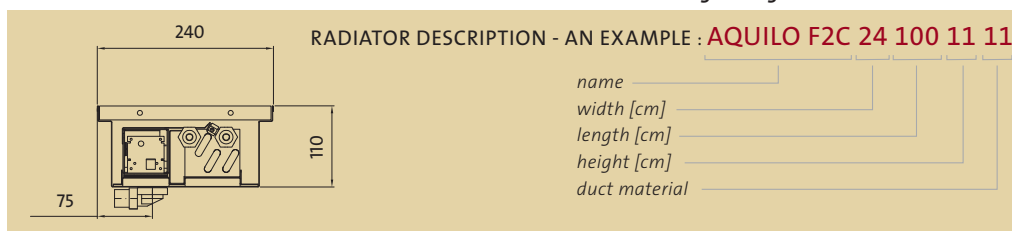
electric power

overall length Lc	[mm]	600 - 1800
number of motors	[-]	1
electric power	[W]	11

sound intensity $L_p(A)$, as measured in the distance 1 m from the convector

overall length Lc	[mm]	600	1000	1400	1800
number of fans	[-]	1	2	3	4
fan's 3 rd rotation setting	dB(A)	27.1	28.2	29.0	29.7
fan's 2 nd rotation setting	dB(A)	25.5	26.6	27.4	28.1
fan's 1 st rotation setting	dB(A)	17.0	18.1	18.9	19.6

Note: do not use the lengthwise grilles with the F2C convectors!



Lc overall length [mm]	parameters t _z / t _p / t _i [°C]	width 240 mm, height 110mm				
		cooling output [W]	heat output [W]	number of motors	transformer's type	electric power [W]
600	75/65/20 70/55/20 55/45/20 6/12/26	242	878 741 524	1	PAT-01	11
1000	75/65/20 70/55/20 55/45/20 6/12/26		1975 1667 1178	1		11
1400	75/65/20 70/55/20 55/45/20 6/12/26		3072 2593 1832	1		11
1800	75/65/20 70/55/20 55/45/20 6/12/26		4169 3518 2486	1		11

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C, listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 17%, and for the 3rd setting – increased with 8% compared to the values given in the table above.

Convectors' cooling heat output [W] for parameters 6/12/26°C is listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 10%, and for the 3rd setting – increased with 4% compared to the values given in the table above.

All Aquilo convectors available on request.

Aquilo F2C *(heating or cooling)*

trench convectors

example of the built-in convector with the aluminum PMO grille



examples of execution



Aquila F4C *(heating and cooling)*

Trench convectors Aquilo F4C are especially designed for the in-floor mounting, and can be used for either heating or cooling. The heating or cooling element is a double-loop copper-aluminum heat exchanger, painted black, mounted inside a duct made of stainless steel in natural colour. Aquilo F4C convectors are equipped with noiseless centrifugal fans mounted inside the duct, by the exchanger, whose number depends on the exchanger's length, providing the enforced air circulation and – with it – adequately higher heating or cooling efficiency of the convector. The fans are driven with 12 V motors. From the top the convector is protected with a crosswise masking grille made of any material available in the Manufacturer's offer, to be ordered separately. The exchanger's connection to the quadruple-pipe heating system is executed with four stub pipes with a G ½" internal thread. Obligatory electrical accessories, to be ordered separately, constitute a properly selected transformer (for surface or flush mounting), as well as a surface-mounted thermostat for the fan's rotation regulation.

technical specification

- Width : 340 mm
- Length : 1250, 2000, 2750 mm
- Height : 140 mm
- Exchanger composition : aluminum finned copper pipes
- Duct material : standard version: stainless steel in natural colour
Note: for swimming pools applications special version have to be ordered!!!
- Grille material : only duralumin grilles can be used in the following choice of colours:
natural, gold, light brown, dark brown or black
- Connections : 4 x G ½" – internal thread
- Operating pressure : 10 bar
- Max. temperature : 110 °C
- Test pressure : 13 bar



- Exchanger accessories : manual air vent, a 10 cm long stainless steel flexible connectors kit with a G ½" thread
- Duct accessories : leveling bolts M8x30 mm with internal hexagon (for the duct length up to 2.5 m – 4 pcs., over 2.5 m – 6 pcs.), 4 surface mounting elements with duct fixing screws, breakable pass for the hydronic heating or cooling system connection + 2 rubber passes for domestic electric circuit connection, steel metal sheet cover masking the exchanger connectors, chip-board protecting the exchanger and duct against damage or smudging during mounting, as well as protecting the duct against distortion during covering with concrete, duct drainage
- Standard electrical accessories : 1 or 2 modules with centrifugal fans driven with 12 V/50 Hz motors (the number of the fans in a single module depends on the convector's length). Every single module incorporates one motor
- Obligatory additional electrical accessories : PAT transformer (~230/12 V) appropriate to the convector's - or the group of convectors – size, depending on the number of connected motors, together with a manual switch, or a room thermostat with a manual or automatic rotation switch, to regulate the convector's heating or cooling efficiency via a three-level setting of the fan's rotation (the remote-controlled thermostat available).

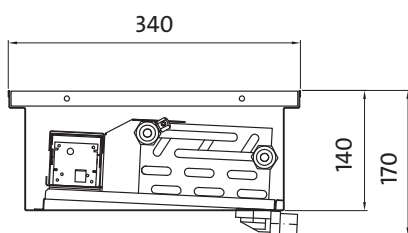
NOTE:

It is strictly forbidden to power the F4C convector directly from the ~230 V electric circuit. The application of an adequate PAT transformer is a must.

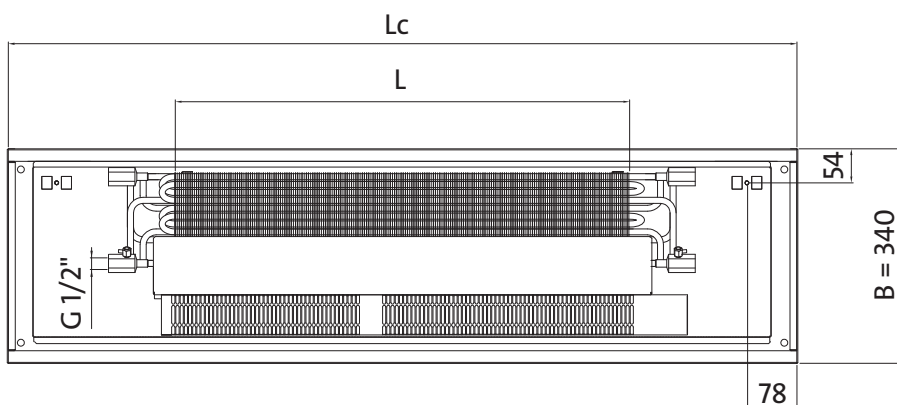
Aquilo F4C *(heating and cooling)*

trench convectors

side view



top view



L_c - convector's overall length
L - exchanger's length
B - width

$$L = L_c - 520 \text{ mm}$$

weight and water volume

width - B	[mm]	340
height	[mm]	140
weight	[kg/m]	16.3
water volume	[l/m]	0.4

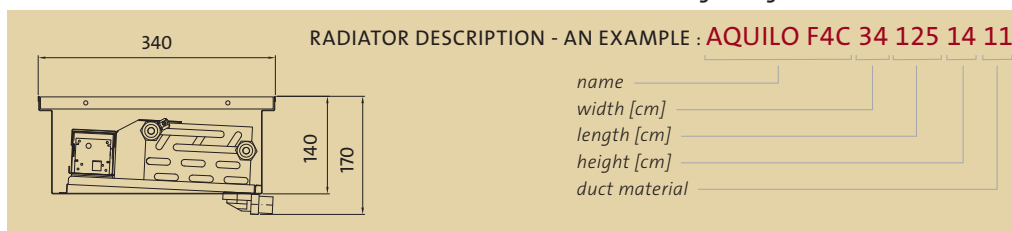
electric power

overall length L _c	[mm]	1250	2000 - 2750
number of motors	[-]	1	2
electric power	[W]	11	22

sound intensity L_p(A), as measured in the distance 1 m from the convector

overall length L _c	[mm]	1250	2000	2750
number of fans	[-]	2	4	6
fan's 3 rd rotation setting	dB(A)	28.2	29.7	30.9
fan's 2 nd rotation setting	dB(A)	26.6	28.1	29.3
fan's 1 st rotation setting	dB(A)	18.1	19.6	20.8

Note: do not use the lengthwise grilles with the F4C convectors!



Lc overall length [mm]	parameters $t_z / t_p / t_i$ [°C]	width 340 mm, height 140mm				
		cooling output [W]	heat output [W]	number of motors	transformer's type	electric power [W]
1250	75/65/20 70/55/20 55/45/20 6/12/26	442	1606 1355 958	1	PAT-01	11
2000	75/65/20 70/55/20 55/45/20 6/12/26		3221 2718 1921	2		22
2750	75/65/20 70/55/20 55/45/20 6/12/26		4837 4082 2885	2		22
		1332				

Convectors' heat output [W] in accordance with PN-EN 442 standard for parameters 75/65/20°C, 70/55/20°C and 55/45/20°C, listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 26%, and for the 3rd setting – increased with 28% compared to the values given in the table above.

Convectors' cooling heat output [W] for parameters 6/12/26°C is listed for the fan's 2nd rotation setting. For the 1st setting, the heat output [W] will be reduced with 20%, and for the 3rd setting – increased with 24% compared to the values given in the table above.

All Aquilo convectors available on request.

example of the built-in convector with the aluminum PMO grille



Masking grilles

trench convectors

description



wooden, crosswise

- Beech or oak.
- Raw, oiled or varnished
- Roll-up crosswise grille with oak or beech crosspieces
- The wooden grille is supplied, as standard, in the PMO raw version, i.e. with no finishing frame
- Free flow: 58%



duralumin, crosswise

- Roll-up crosswise grille with eloxed duralumin crosspieces
- Available colors: natural, golden, light brown, dark brown or black
- The grille is supplied, as standard, in the PMO raw version, i.e. with no finishing frame
- Free flow: 71%



duralumin, lengthwise

- Lengthwise grille with eloxed duralumin crosspieces
- Available colors: natural, golden, light brown, dark brown or black
- The grille is supplied, as standard, in the PMO raw version, i.e. with no finishing frame
- Free flow: 71%



stainless steel, crosswise

- Roll-up crosswise grille with stainless steel crosspieces
- Steel variety: 1.4301
- The grille is supplied, as standard, in the PMO raw version, i.e. with no finishing frame
- Free flow: 58%



stainless steel, lengthwise

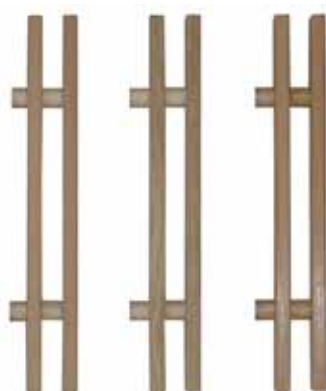
- Lengthwise grille with stainless steel crosspieces
- Steel variety: 1.4301
- The grille is supplied, as standard, in the PMO raw version, i.e. with no finishing frame
- Free flow: 58%

duralumin grille



natural gold light brown dark brown black

wooden grille



beech or oak raw beech or oak oiled beech or oak varnished

steel grille



stainless steel

NOTE: Lengthwise grilles to be used only with the FMK convectors

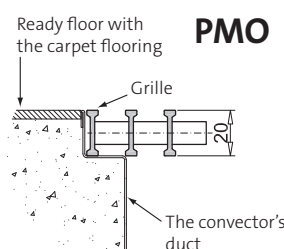
finishing frames

Masking grilles for the Aquilo trench convectors are available in versions without decorative finishing frames or with L or Z-type decorative finishing frames. Due to different lengths of the grille fins in the decorative finishing frame or no frame version (for the convectors of the same length), all the frames must be ordered along with the grilles. The L and Z-type frames are available in the duralumin only, however the L-type frames are available in all colour variants, the same as in case of the duralumin grilles, while the Z-type frames are only available in natural aluminum coloring.

Execution with no decorative frame

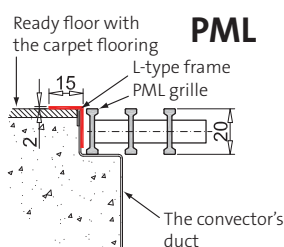
The application of masking grilles without a decorative frame is possible only when the trench convector has been carefully mounted, and especially carefully positioned vertically in reference to the level of the finished floor.

This execution assumes, at the same time, the perfect floor finish around the trench convector, with the slot of the same width.



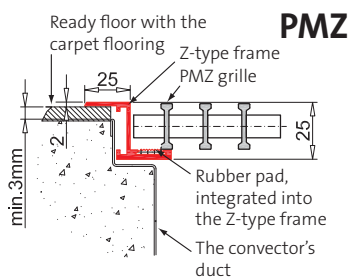
Execution with the L-type decorative frame

The masking grille with the L-type decorative frame optically frames the trench convector within the surrounding floor. The L-type frame covers the contact area between the duct and the floor, that is why it is primarily used for places where the slot between the trench convector's duct and the surrounding floor is uneven. The L-type frame is supplied along with the masking grille, in adequately trimmed segments to be mounted onto the convector's duct while the grille is being positioned. To the L-type frame can be easily fixed to the floor with the double-sided self-adhesive tape placed on its bottom.



Execution with the Z-type decorative frame

The masking grille with the Z-type decorative frame optically frames the trench convector within the surrounding floor. The Z-type frame covers the contact area between the duct and the floor, as well as creates the base for positioning the masking grilles. It is mainly used for places where the convector's duct is set deeper ("sunk") in reference to the floor surface level, as well as in cases where the convector has not been evenly positioned horizontally in reference to the surrounding floor, and finally in places where the slot between the trench convector's duct and the surrounding floor is uneven. The Z-type frame is supplied as a set along with the masking grille. Floor fixing with the silicone adhesive is recommended.



- The L-type decorative frames are available in the same coloring as the grilles.
- The Z-type decorative frames are available in the natural aluminum coloring only.
- The Z and L-type frames must be ordered along with the grille!
- The grille's width in no frame version (PMO) varies from the one with the L-type frame (PML) or the one with the Z-type frame (PMZ), for the same convector's width! That is why the PMO grille will not fit the PML or PMZ kit, and similarly the PML grille will not fit the PMZ kit!
- Mounting with the Z-type frame version requires positioning the convector's duct 3-5 mm below the surface of the finished floor.
- If, due to the improper mounting or the mechanical damage, the convector's duct becomes deformed, the Manufacturer shall not be held responsible for occurrence of the prospective difficulties with positioning the decorative frames or grilles.

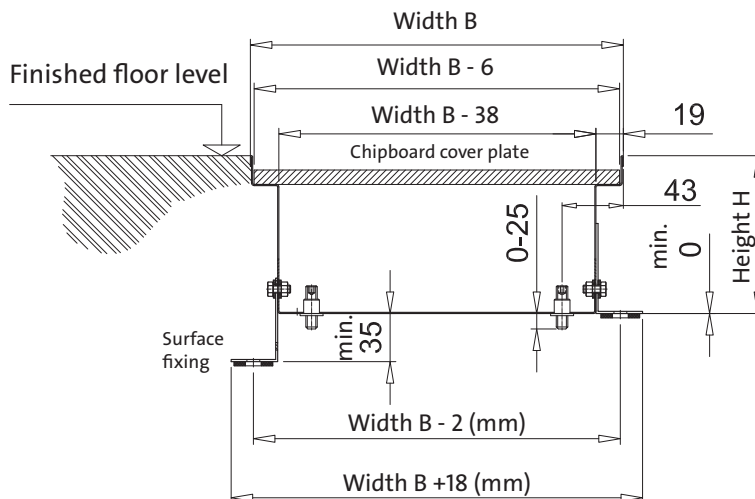
The Z and L-type frames must be ordered along with the grille! The Z-type frame version requires positioning the convector's duct 3-5 mm below the surface of the finished floor! The Z-type frame is supplied as an assembled frame. Silicone adhesives are recommended for mounting the frames to the finished floor. The L-type frame is supplied disassembled, with the double-sided self-adhesive tape placed inside. If the convector's duct becomes deformed due to the improper mounting or the mechanical damage, the Manufacturer shall not be held responsible for occurrence of the prospective difficulties with positioning the decorative frames.

How to mount our convectors

trench convectors

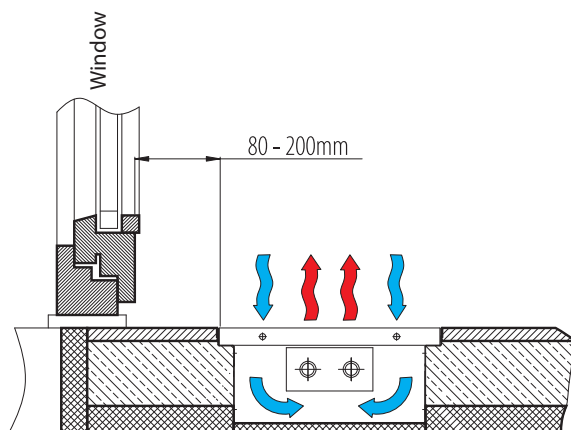
convector's duct

The duct should be prepared for mounting in advance (the anchors fixed to the concrete subfloor, the passes for pipes and cables broken). The duct should be placed on the preliminarily laid and leveled floor, and positioned with the leveling bolts so as the duct's top edge adjoins the finished floor's level. While mounting, the protective cover should be placed inside the duct at all times. Connect the heat exchanger to the domestic hydronic heating system, complete the electric works, and – in the pool version – connect the drainage pipes to the outlets in the bottom of the duct. Proceed with the pressure and fan performance tests. Fix the duct with the concrete. The fan version requires the preliminary muffling of the duct's bottom, e.g. with polyurethane foam.

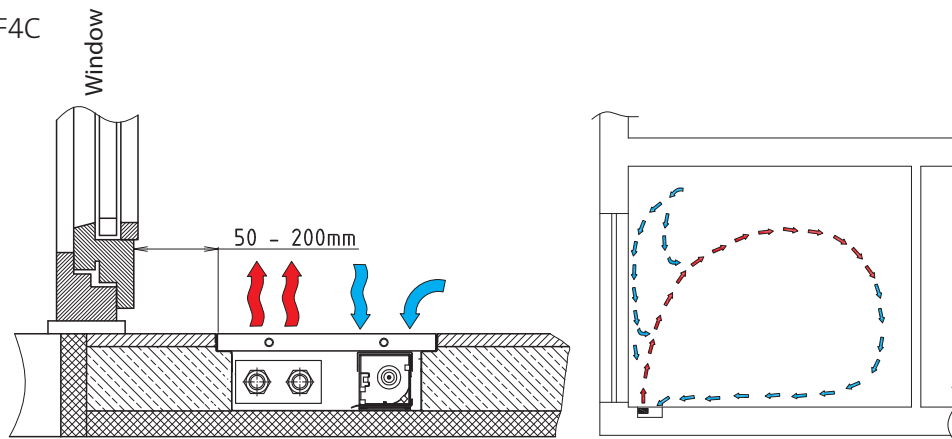


recommended mounting procedure for trench convectors

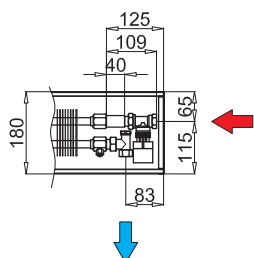
Aquilo FMK



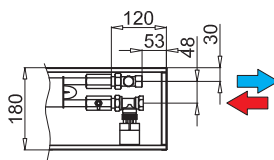
Aquilo F1T, F1P, F2C and F4C



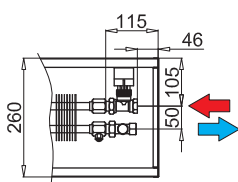
FMK-18
height: 9, 11, 14



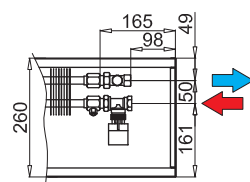
F1P-18
height: 9



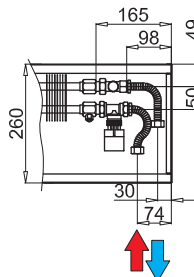
FMK-26
height: 9, 11, 14



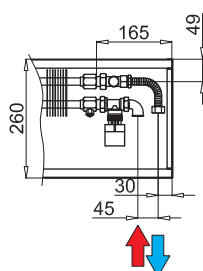
F1T-26
height: 9, 14



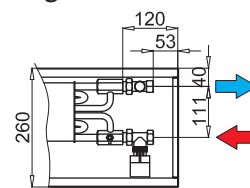
F1T-26
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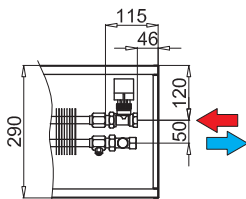
F1T-26
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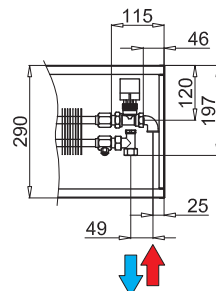
F1P-26
height: 9



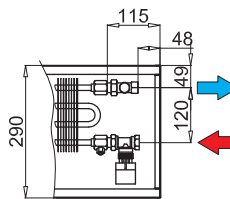
FMK-29
height: 9, 11, 14



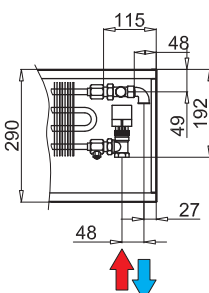
FMK-29
height: 9, 11, 14



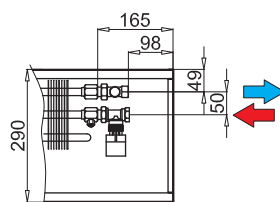
F1T-29
height: 9



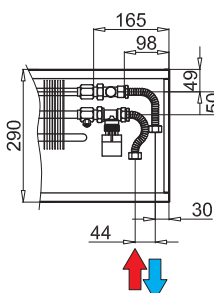
F1T-29
height: 9



F1T-29
height: 14



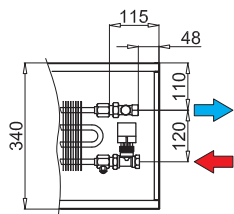
F1T-29
height: 14



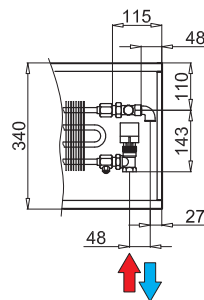
How to mount our convectors

trench convectors

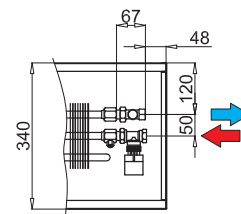
FMK-34
height: 9, 11



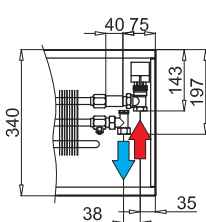
FMK-34
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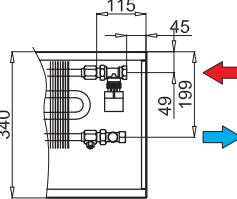
FMK-34
height: 14



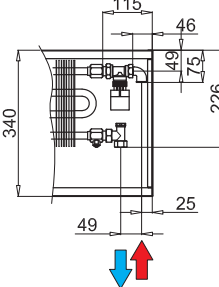
FMK-34
height: 14



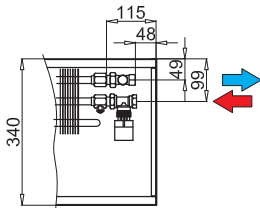
F1T-34
height: 9



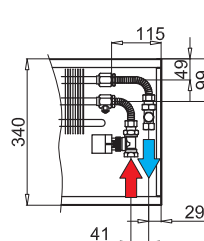
F1T-34
height: 9



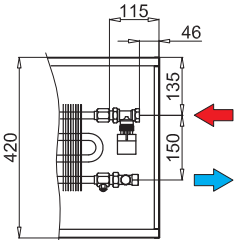
F1T-34
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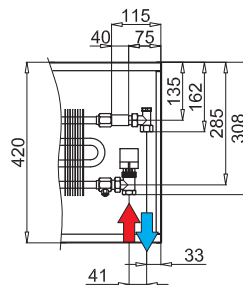
F1T-34
height: 14



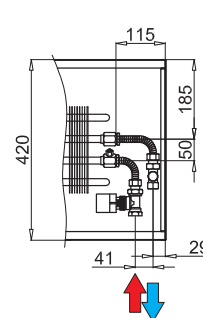
FMK-42
height: 9, 11



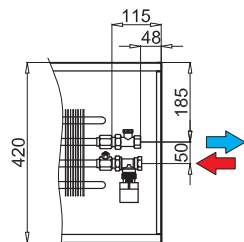
FMK-42
height: 9, 11



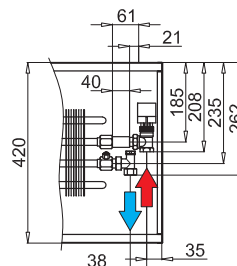
FMK-42
height: 9, 11



FMK-42
height: 14

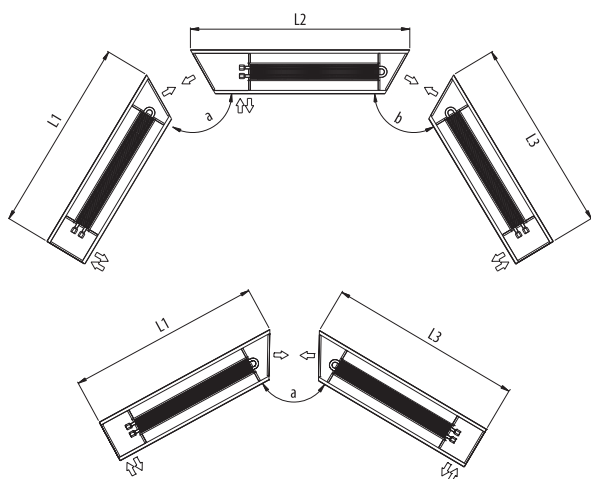


FMK-42
height: 14

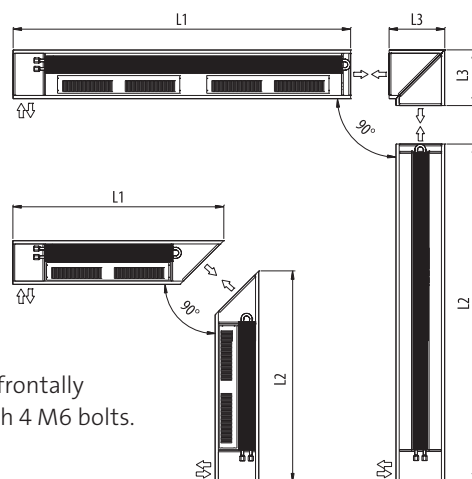


non-standard versions

The corner type of trench radiators is available at request. The duct is then manufactured, after the graphic design has been accepted by the Client.

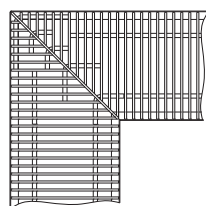


Note: no stainless steel grilles for the corner versions are available

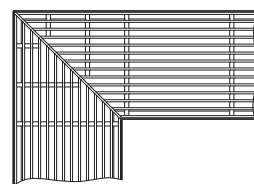


The ducts are frontally connected with 4 M6 bolts.

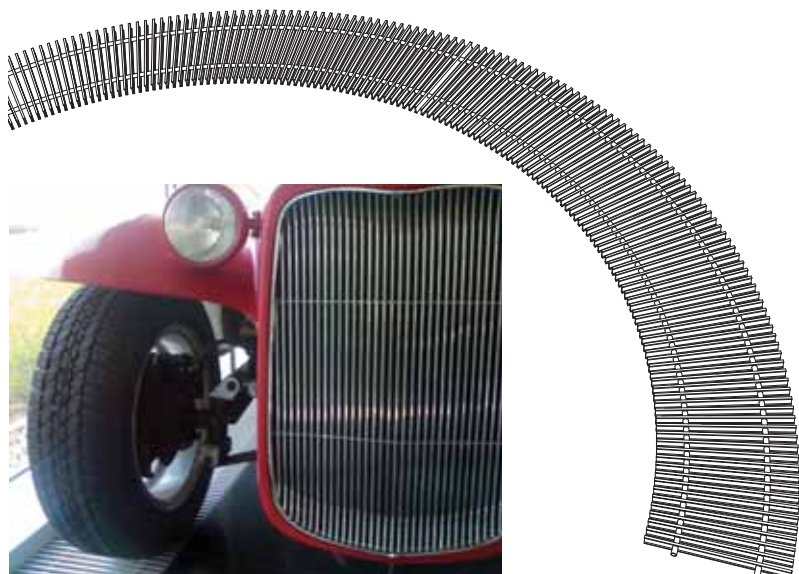
crosswise grille



lengthwise grille



examples of non-standard grilles



note

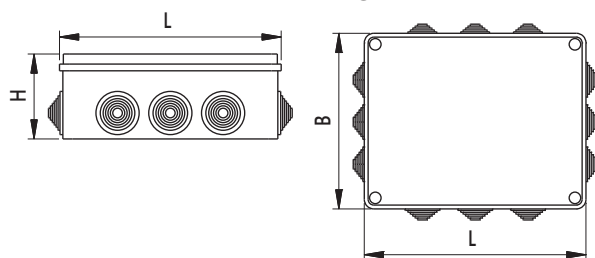
The electrical installation of Aquilo trench convectors should be carried out by a qualified electrician in accordance with current, relevant standards and regulations. The main connection to supply net can only be executed if all connections between proper electrical accessories have been successfully checked.

electrical connections for trench convectors Aquilo F1T, F1P, F2C and F4C

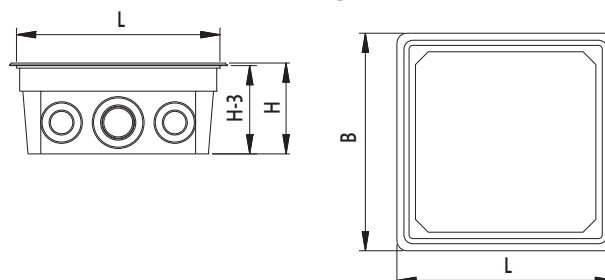
The maximal length of cables between the Aquilo F1T, F1P, F2C or F4C convectors and the PAT transformer is 10 m. In case it becomes necessary to use longer cable segments, a bigger cable diameter is required to keep the voltage drop at max. 1.0 V (recommended value is approx. 0.5 V). The transformer electrical circuit should be equipped with a D6A interrupter. The surface-mounted transformer (PAT-xx-M-01) is to be connected to the electrical circuit with a double-core 2x1.5 mm² cable, while the flush-mounted version (PAT-xx-M-02) – 3x1.5 mm² (e.g. YDY or YKY type). The safety terminal (only for the flush version) is to be found inside the transformer's case. Also inside, a pipe fuse interrupter is located, protecting the transformer's winding. The PAT transformer's connection to the thermostat equipped with a 3-level rotation switch is to be made with a 5x0.75 mm² cable. The Aquilo convector duct's cables are to be connected via the terminals in the electrical installation box (1 or 2 pcs., depending on the number of motors).

PAT transformer – dimensions

version for surface mounting



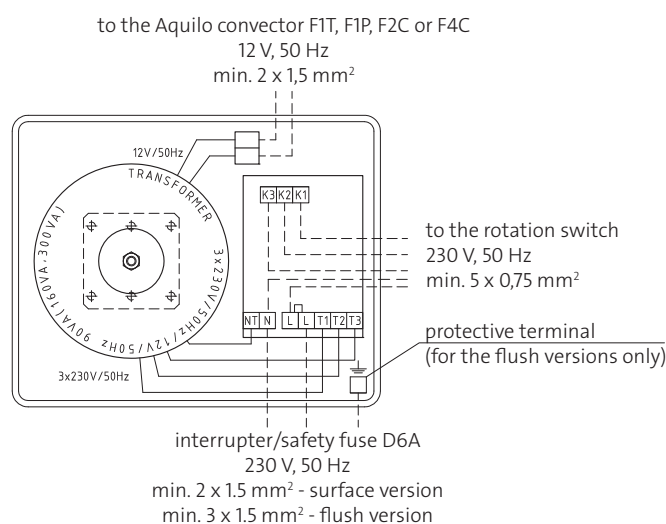
version for flush mounting



type	length L [mm]	width B [mm]	height H [mm]	weight [kg]
PAT-01-M-01	230	185	90	2.2
PAT-02-M-01	230	185	90	2.2
PAT-04-M-01	230	185	90	2.9
PAT-06-M-01	230	185	90	4.2

type	length L [mm]	width B [mm]	height H [mm]	weight [kg]
PAT-01-M-02	230	230	84	2.8
PAT-02-M-02	170	170	71	1.7
PAT-04-M-02	230	230	84	2.7
PAT-06-M-02	230	230	84	4.0

internal schematics of a PAT transformer :



proper selection of PAT transformers

The Aquilo F1T, F1P, F2C and F4C convector fan motors are powered at ~12 V/50 Hz, and that is why the additional PAT transformers are required, together with a wall-surface regulating device, enabling a 3-level fan rotation regulation.

PAT transformers (depending on the types) can control only the specified limited number of the fans' motors, and cannot control more than they are designed for. Due to the application of motors of a different type in the fan modules currently installed, it has become possible to increase a single transformers' capacity in servicing the number of motors connected to one transformer, in comparison to the earlier Aquilo FMT and FPT versions.

PAT transformer PAT-xx-M-01 in the version for surface mounting

type	power	max. number of connected motors				recommended cable for the convector's connection	control device
		F1T	F1P	F2C	F4C		
PAT-01-M-01	45 W	4	4	4	4	2 x 1.5 mm ²	PSP-01 PPT-02 PER-05 PER-06
PAT-02-M-01	90 W	8	8	8	8	2 x 1.5 mm ²	
PAT-04-M-01	160 W	15	15	15	15	2 x 1.5 mm ²	
PAT-06-M-01	300 W	24	24	24	24	2 x 2.5 mm ²	

PAT transformer PAT-xx-M-02 in the version for flush mounting

type	power	max. number of connected motors				recommended cable for the convector's connection	control device
		F1T	F1P	F2C	F4C		
PAT-01-M-02	45 W	4	4	4	4	2 x 1.5 mm ²	PSP-01 PPT-02 PER-05 PER-06
PAT-02-M-02	90 W	8	8	8	8	2 x 1.5 mm ²	
PAT-04-M-02	160 W	15	15	15	15	2 x 1.5 mm ²	
PAT-06-M-02	300 W	24	24	24	24	2 x 2.5 mm ²	

trench convectors' heat output regulation

Heat output can be controlled either on the side of the heating medium which is water, or air (in fan versions only). The water control is performed via a thermostatic valve + head set, and optionally via an actuator supported thermostatic valve.

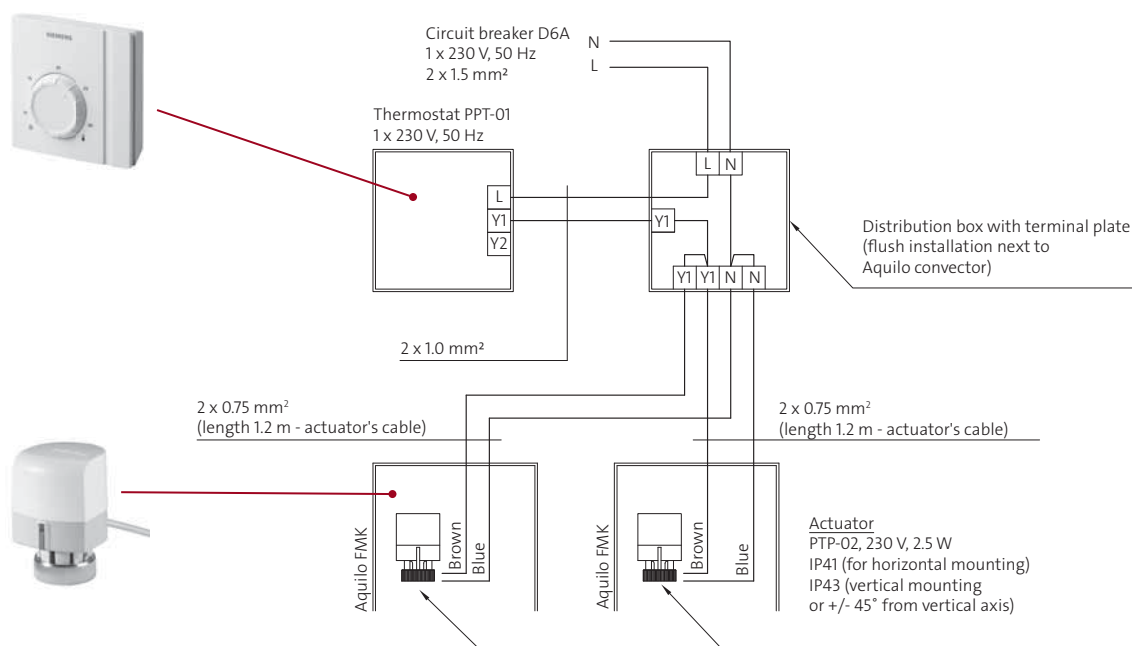
Heat output control for air (in case of Aquilo F1T, F1P, F2C and F4C convectors) will be performed by the fans' rotations setting. Fan operation can be controlled manually by the User, or automatically via a thermostatic controller.

trench convectors' heat output regulation – optional accessories

	catalogue number	description
1. Trench convectors' heat output regulation for water (Aquilo FMK)		
1.1	PTH-01	Thermostatic head with a capillary pipe
1.2	PPT-01	Room thermostat
1.3	PTP-02	Thermoelectric head (actuator)
2. Trench convectors' heat output regulation for air (Aquilo F1T, F1P, F2C and F4C)		
2.1	PSP-01	Fan rotation manual switch
2.2	PPT-02	Room thermostat with a manual fan rotation switch
2.3	PER-05	Room thermostat with an automatic fan rotation switch
2.4	PER-06	Room thermostat with an automatic fan rotation switch and weekly programming

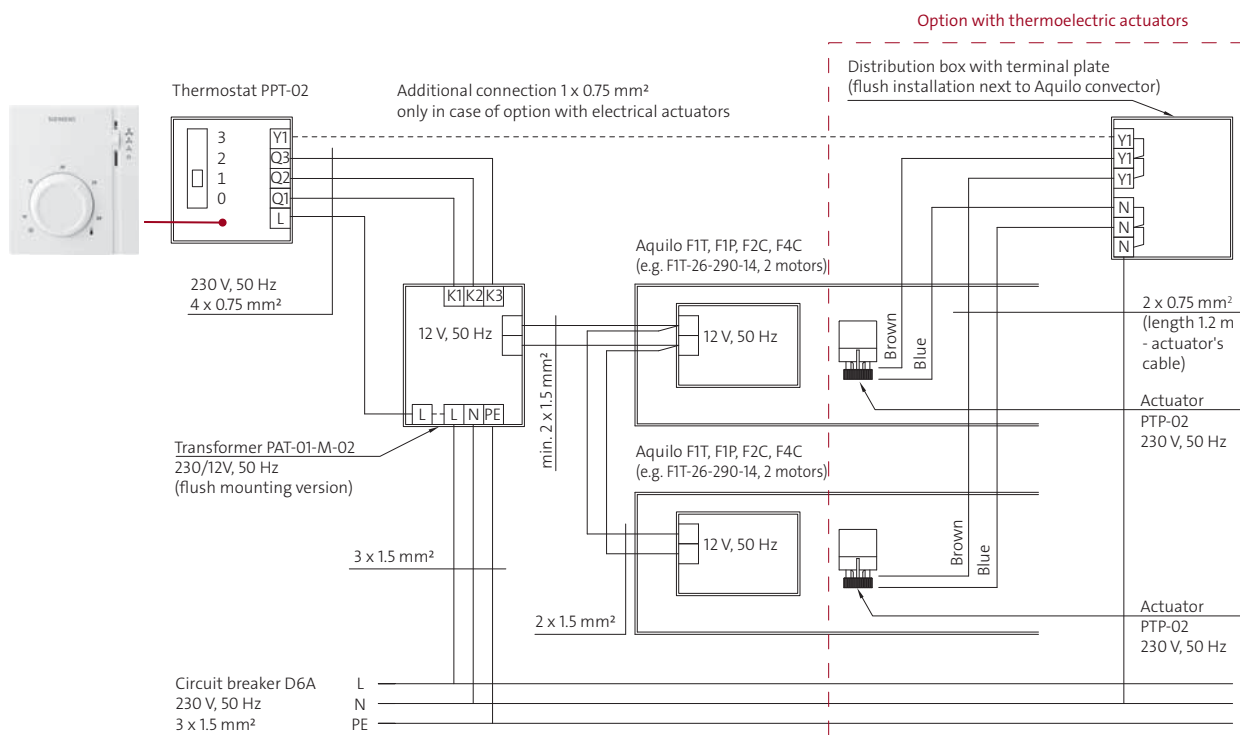
PAT transformer is necessary for the 3-level rotation regulation. The transformer's type depends on the overall number of fan motors controlled with a single control device (PSP-01, PPT-02, PER-05, PER-06).

Aquila FMK convectors, a room thermostat with thermoelectric head (actuator)



Note:
When mounting the actuator directly at the convector's duct, the residual current circuit breaker is necessary.
One PPT-01 thermostat can support max. 24 electric actuators.

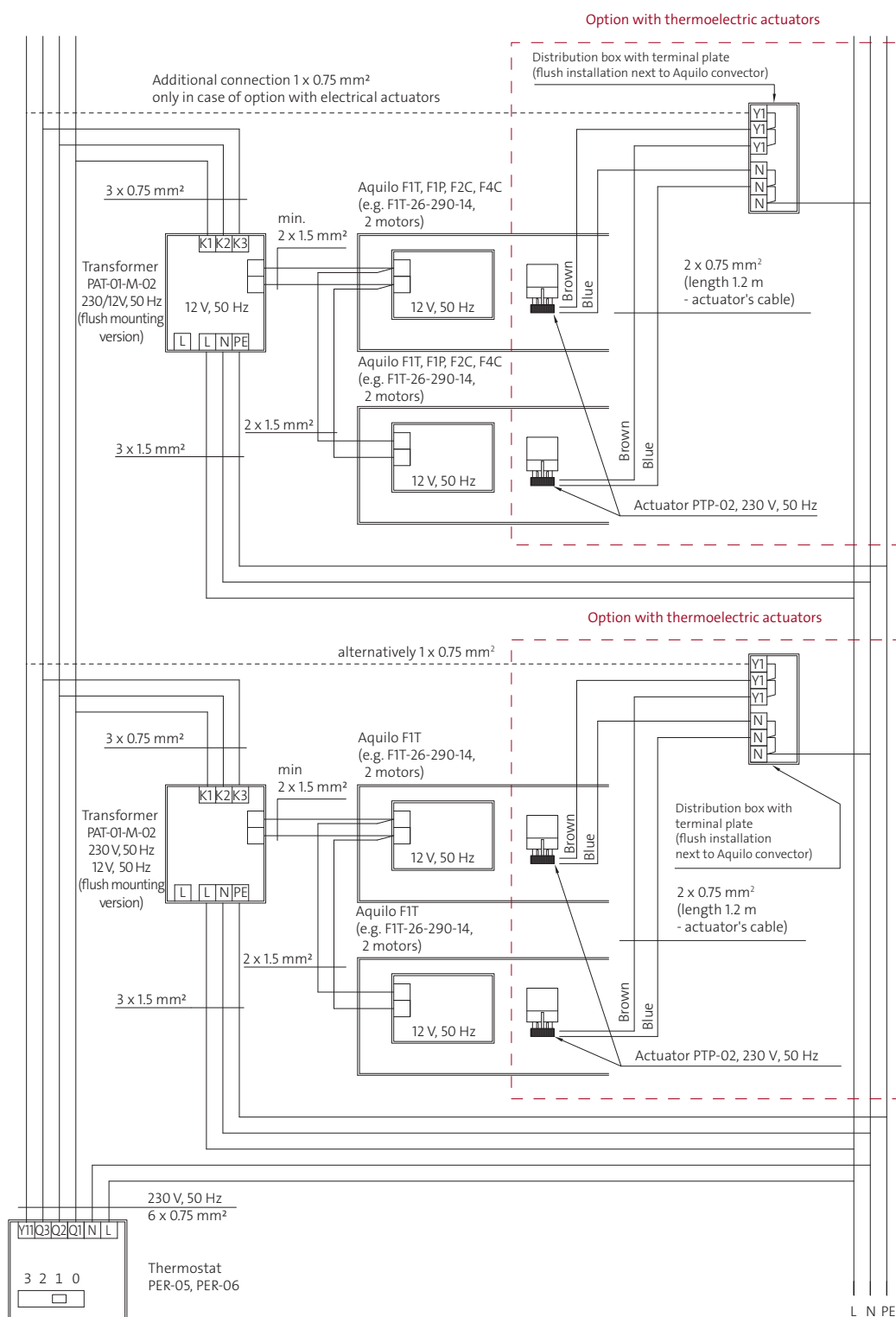
**Aquila F1T, F1P or Aquilo F2C, F4C convectors,
room thermostat PPT-02 with manual 3-level fan rotation setting, PAT transformer,
available option: regulation via thermoelectric heads (actuators)**



Note:

1. The circuit should be protected with residual current circuit breaker.
2. PAT transformer wall mounted connect only with 2 x 1.5 mm² cable (without PE connection)
3. Don't exceed the maximum number of motors connected to the particular type of PAT transformer.

Aquila F1T, F1P or Aquilo F2C, F4C convectors, a room thermostat with an automatic 3-level fan rotation setting, PAT transformers connected in parallel, available option: regulation via thermoelectric heads (actuators)



Note:

1. The circuit should be protected with residual current circuit breaker.
2. PAT transformer wall mounted connect only with 2 x 1.5 mm² cable (without PE connection).
3. Don't exceed the maximum number of motors connected to the particular type of PAT transformer.

Circuit breaker D6A
230 V, 50 Hz, 3 x 1.5 mm²

Wiring schemes *(examples)*

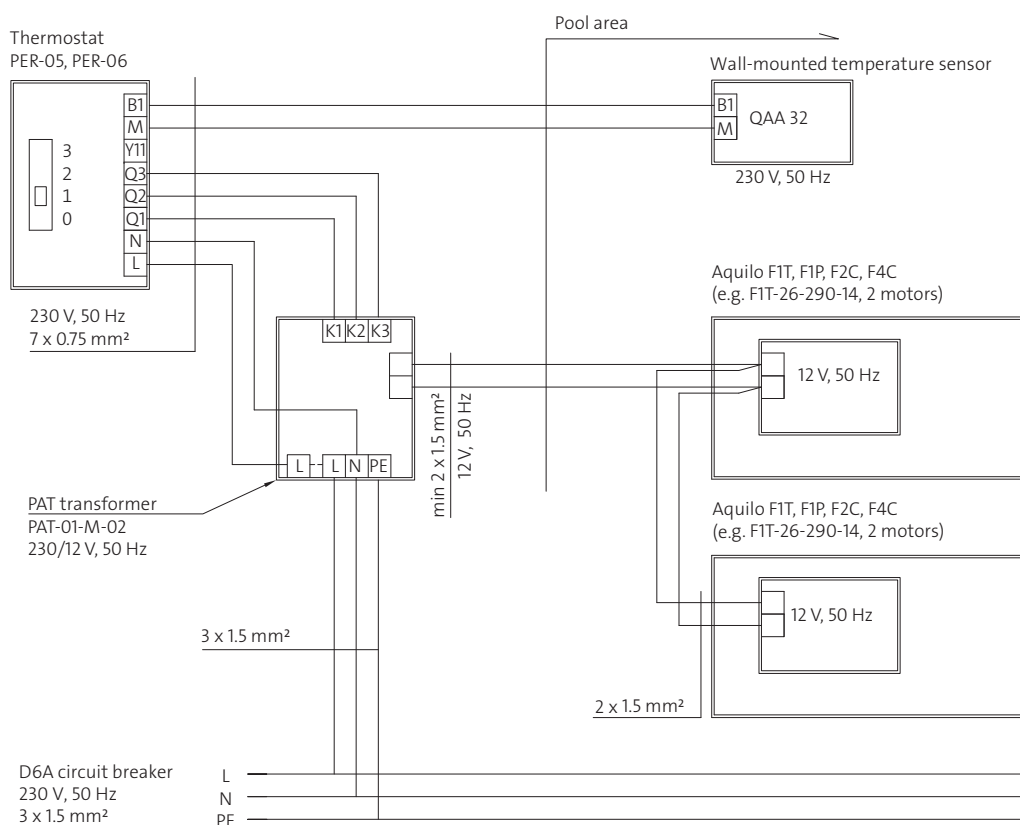
trench convectors

The duct of the convector in the swimming pool version is made of corrosion-resistant material (stainless steel plate). All connections in the duct are sealed with sanitary silicone sealant. There are drainage connections in the duct bottom. Other components are made of corrosion-resistant material (levelling bolts, rivets, etc.).

Note: For safety reasons, fan motors are supplied with 12 V.

Only duralumin grilles are recommended for the swimming pool version.

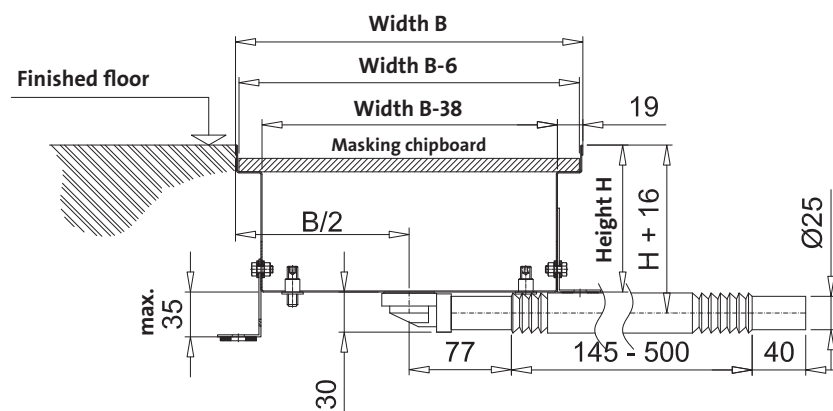
wiring in pool areas

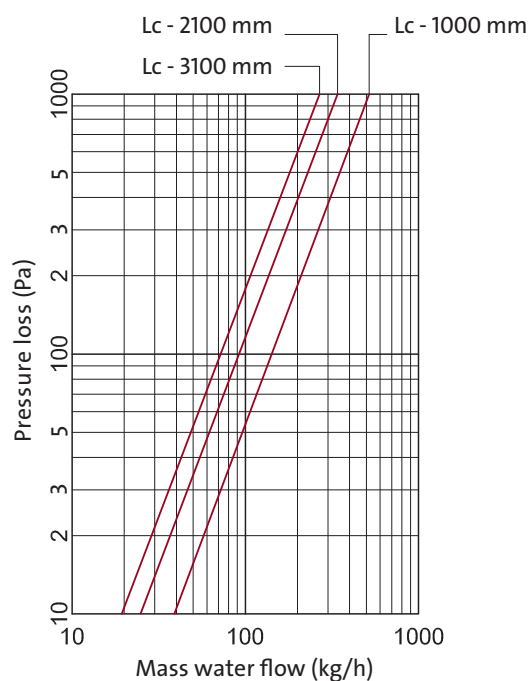


Note:

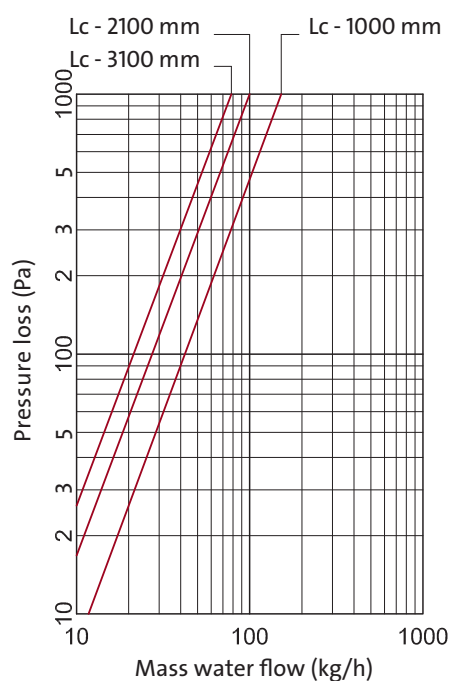
1. The circuit should be protected with residual current circuit breaker.
2. The surface-mounted version of the PAT transformer should be connected to the mains with a 2x1.5 mm² cable (no PE wire).
3. Do not exceed the max. permissible number of motors connected to a single PAT transformer.

duct's drainage

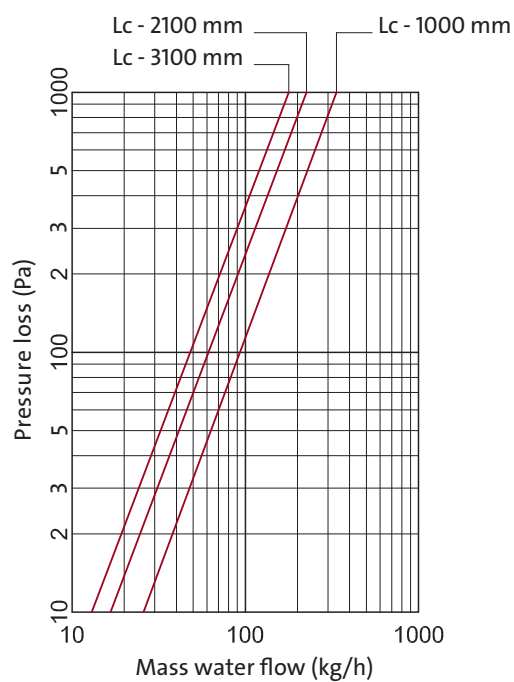




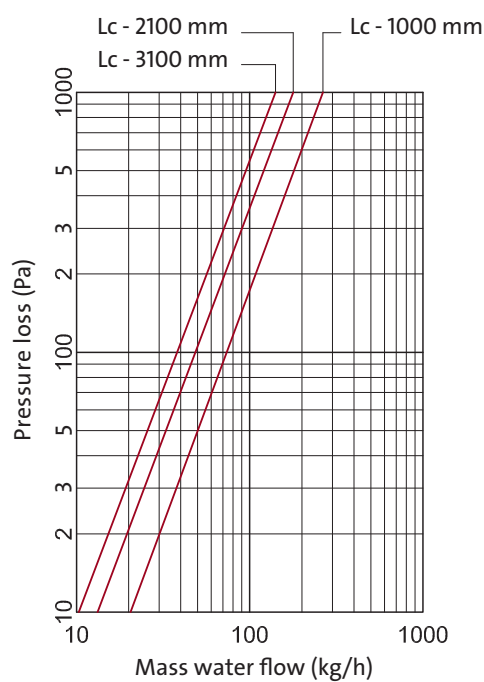
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2	FMK-26-LLL-09, FMK-26-LLL-11
3	FMK-29-LLL-09, FMK-29-LLL-11
4	F1T-26-LLL-09



1	FMK-34-LLL-09, FMK-34-LLL-11
2	F1T-29-LLL-09



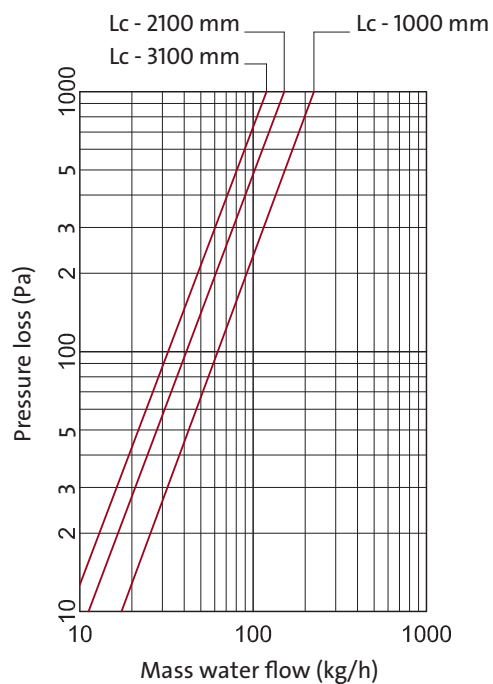
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2	F1T-34-LLL-09
3	FMK-18-LLL-14, FMK-29-LLL-14
4	FMK-26-LLL-14, F1T-26-LLL-14



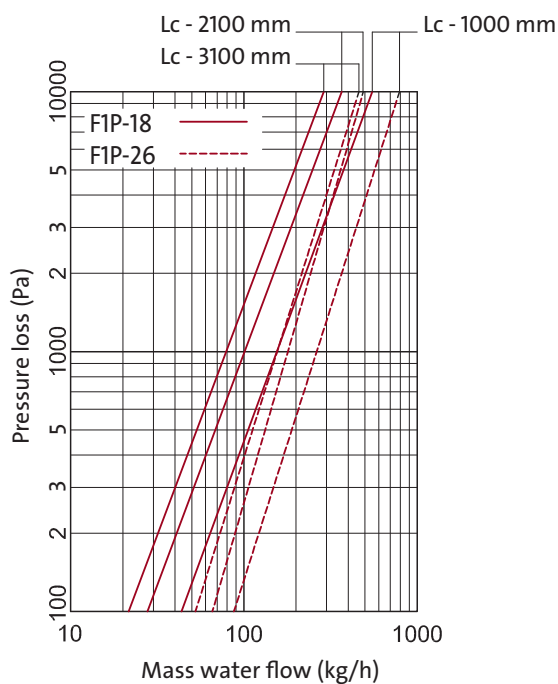
1	FMK-34-LLL-14
2	F1T-29-LLL-14

Hydraulic characteristics

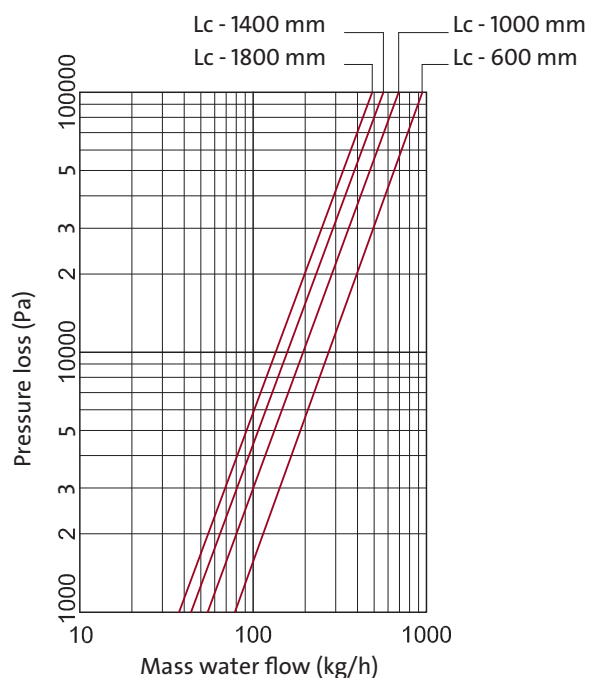
trench convectors



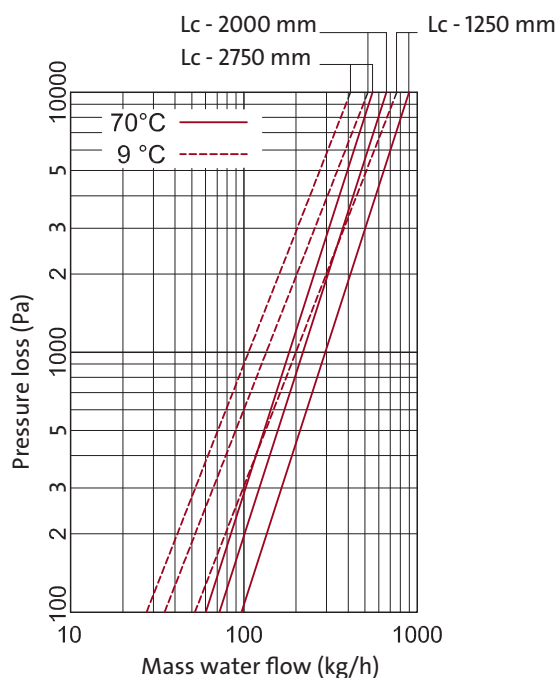
- | | |
|---|---------------|
| 1 | FMK-42-LLL-14 |
| 2 | FIT-34-LLL-14 |



- | | |
|---|---------------|
| 1 | FIP-18-LLL-09 |
| 2 | FIP-26-LLL-09 |










- | | |
|---|---------------|
| 1 | F2C-24-LLL-11 |
|---|---------------|










- | | |
|---|---------------|
| 1 | F4C-34-LLL-14 |
|---|---------------|

supply water tem- perature [°C]		Aquila FMK trench convector n = 1.4															return water temperature [°C]	
		air tem- perature [°C]	35	40	45	50	55	60	65	70	75	80	85					
90	15	0.78	0.88	0.98	1.08	1.17	1.26	1.35	1.43	1.52	1.61	1.69		0.52	0.46	15	45	
	20	0.63	0.73	0.83	0.93	1.02	1.11	1.19	1.28	1.36	1.45	1.53		0.42	0.36	20		
	24	0.51	0.62	0.72	0.81	0.90	0.99	1.08	1.16	1.24	1.32	1.40		0.33	0.28	24		
85	15	0.73	0.83	0.93	1.02	1.11	1.19	1.28	1.36	1.45	1.53		0.62	0.57	0.51	15	50	
	20	0.59	0.69	0.78	0.87	0.96	1.05	1.13	1.21	1.29	1.37		0.52	0.46	0.40	20		
	24	0.47	0.58	0.67	0.76	0.85	0.93	1.01	1.09	1.17	1.25		0.44	0.38	0.32	24		
80	15	0.69	0.78	0.87	0.96	1.05	1.13	1.21	1.29	1.37		0.73	0.67	0.61	0.56	15	55	
	20	0.55	0.64	0.73	0.82	0.90	0.99	1.07	1.14	1.22		0.62	0.57	0.51	0.44	20		
	24	0.44	0.54	0.63	0.71	0.79	0.87	0.95	1.03	1.10		0.54	0.48	0.42	0.35	24		
75	15	0.64	0.73	0.82	0.90	0.99	1.07	1.14	1.22		0.84	0.78	0.72	0.66	0.59	15	60	
	20	0.51	0.60	0.69	0.77	0.85	0.92	1.00	1.07		0.73	0.67	0.61	0.55	0.48	20		
	24	0.40	0.50	0.58	0.66	0.74	0.82	0.89	0.96		0.64	0.59	0.53	0.46	0.39	24		
70	15	0.60	0.69	0.77	0.85	0.92	1.00	1.07		0.95	0.89	0.83	0.77	0.70	0.63	15	65	
	20	0.47	0.56	0.64	0.71	0.79	0.86	0.93		0.84	0.78	0.72	0.66	0.59	0.52	20		
	24	0.37	0.46	0.54	0.61	0.68	0.76	0.83		0.75	0.69	0.63	0.57	0.50	0.42	24		
65	15	0.56	0.64	0.71	0.79	0.86	0.93		1.06	1.00	0.94	0.88	0.81	0.74	0.67	15	70	
	20	0.43	0.51	0.59	0.66	0.73	0.80		0.95	0.89	0.83	0.77	0.70	0.63	0.55	20		
	24	0.33	0.41	0.49	0.56	0.63	0.70		0.86	0.80	0.74	0.68	0.61	0.54	0.46	24		
60	15	0.51	0.59	0.66	0.73	0.80		1.17	1.11	1.05	0.99	0.92	0.86	0.78	0.71	15	75	
	20	0.39	0.47	0.54	0.60	0.67		1.06	1.00	0.94	0.88	0.81	0.74	0.67	0.59	20		
	24	0.30	0.37	0.44	0.51	0.57		0.97	0.91	0.85	0.79	0.72	0.65	0.58	0.49	24		
55	15	0.47	0.54	0.60	0.67		1.28	1.22	1.16	1.10	1.04	0.97	0.90	0.83	0.76	15	80	
	20	0.35	0.42	0.49	0.55		1.17	1.11	1.05	0.99	0.92	0.86	0.78	0.71	0.62	20		
	24	0.27	0.33	0.40	0.46		1.08	1.02	0.96	0.90	0.83	0.77	0.69	0.61	0.52	24		
50	15	0.42	0.49	0.55		1.40	1.34	1.28	1.21	1.15	1.08	1.01	0.94	0.87	0.79	15	85	
	20	0.31	0.37	0.43		1.28	1.22	1.16	1.10	1.04	0.97	0.90	0.83	0.75	0.66	20		
	24	0.23	0.29	0.35		1.19	1.13	1.07	1.01	0.95	0.88	0.81	0.73	0.66	0.56	24		
45	15	0.37	0.43		1.51	1.45	1.39	1.33	1.26	1.19	1.13	1.06	0.98	0.91	0.82	15	90	
	20	0.27	0.33		1.40	1.34	1.28	1.21	1.15	1.08	1.01	0.94	0.87	0.78	0.69	20		
	24	0.19	0.25		1.30	1.25	1.19	1.12	1.06	0.99	0.92	0.85	0.77	0.68	0.59	24		
return water temperature [°C]		Aquila F1T, F1P, F2C, F4C trench convectors, fan version n = 1.1															air tem- perature [°C]	supply water tem- perature [°C]

Example: the FMK-26-100-11 convector, heat output at 75/65/20°C: $Q_N = 266$ W, supply temperature: 55°C, return temperature: 45°C, air temperature: 20°C, heat transfer coefficient $K1 = 0.49$
Calculated heat output: $Q = Q_N \times K1 = 266 \text{ W} \times 0.49 = 130 \text{ W}$

description		order code																						
	DN15 thermostatic valve – NF shortened version: PN10 / 110 °C Straight version DN15 PTV-01 Angle version DN15 PTV-02	AZA3PTV01 AZA3PTV02																						
	<table><tr><th>Valve setting</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>N</th></tr><tr><td>k_v [m³/h]</td><td>0.10</td><td>0.20</td><td>0.31</td><td>0.45</td><td>0.69</td><td>0.89</td></tr></table>		Valve setting	1	2	3	4	5	N	k_v [m³/h]	0.10	0.20	0.31	0.45	0.69	0.89								
Valve setting	1	2	3	4	5	N																		
k_v [m³/h]	0.10	0.20	0.31	0.45	0.69	0.89																		
	DN15 thermostatic cut-off valve: PN10 / 110 °C Straight version DN15 PRS-01 Angle version DN15 PRS-02	AZA3PRS01 AZA3PRS02																						
	<table><tr><th>Rotation no. until total cut-off</th><th>0,25</th><th>0,5</th><th>0,75</th><th>1</th><th>1,5</th><th>2</th><th>2,5</th><th>3</th><th>3,5</th><th>4</th><th>k_{vs}</th></tr><tr><td>k_v [m³/h]</td><td>0.2</td><td>0.4</td><td>0.5</td><td>0.65</td><td>1.0</td><td>1.3</td><td>1.7</td><td>1.9</td><td>2.1</td><td>2.3</td><td>2.5</td></tr></table>		Rotation no. until total cut-off	0,25	0,5	0,75	1	1,5	2	2,5	3	3,5	4	k_{vs}	k_v [m³/h]	0.2	0.4	0.5	0.65	1.0	1.3	1.7	1.9	2.1
Rotation no. until total cut-off	0,25	0,5	0,75	1	1,5	2	2,5	3	3,5	4	k_{vs}													
k_v [m³/h]	0.2	0.4	0.5	0.65	1.0	1.3	1.7	1.9	2.1	2.3	2.5													
	PTH-01 thermostatic valve with a capillary pipe: Temperature regulation control Capillary pipe's length Anti-freezing protection	 AZA3PTH01 8-28 °C 2 m 8 °C																						
	PPT-01 room thermostat: Operating voltage Required temperature setting range Terminal load IP protection rating Colour Width x height x depth Note: the thermostat should be positioned approx. 1.5 m above the floor level, and not exposed to direct sun radiation or other local heat or cold source.	 AZA3PPT01 230 V / 50 Hz 8 - 30 °C 0.2-6 (2) A IP 30 white RAL 9010 96.4 x 99.6 x 42.8 mm																						
	PTP-02 actuator for thermostatic valve: Operating voltage Cable length Power load Starting current (transitory) Connecting cable IP protection rating Thread connector	 AZA3PTP02 230 V / 50 Hz no-current shut-off version 1.2 m 2.5 W 250 mA (230 V / 50 Hz) 2 x 0.75 mm² IP 41 (horizontal mounting) IP 43 (mounting: vertical and ± 45° from the vertical axis) M30 x 1.5																						
	PSP-01 manual 3-level rotation switch: Operating voltage Number of rotation settings Terminal load IP protection rating Colour Width x height x depth	 AZA3PSP01 230 V / 50 Hz off + 3 0.2-6 (2) A IP 30 white RAL 9010 96.4 x 113.1 x 42 mm																						
	PPT-02 room thermostat with a 3-level rotation switch: Operating voltage Required temperature setting range Number of rotation settings Terminal load IP protection rating Colour Width x height x depth Note: the thermostat should be positioned approx. 1.5 m above the floor level, and not exposed to direct sun radiation or other local heat or cold source.	 AZA3PPT02 230 V / 50 Hz 8 - 30 °C off + 3 0.2-6 (2) A IP 30 white RAL 9010 96.4 x 113.1 x 42 mm																						

	description	order code
	PER-05 room thermostat with automatic rotation switch - available option: remote control Operating voltage 230 V / 50 Hz Power load max 8 W Control output load 230 V / 50 Hz, max 4 (2) A IP protection rating IP 30 Required temperature setting range 5 - 40 °C Fan rotation regulation manual (0,1,2,3) / automatic Width x height x depth 86 x 86 x 39 mm Note: the thermostat should be positioned approx. 1.5 m above the floor level, and not exposed to direct sun radiation or other local heat or cold source. Note: order together with PER-06-IK flush box	AZA3PER05
	PER-06 room thermostat with automatic rotation switch and weekly programming – available option: remote control Operating voltage 230 V / 50 Hz Power load max 8 W Control output load 230 V / 50 Hz, max 4 (2) A IP protection rating IP 30 Required temperature setting range 5 - 40 °C Fan rotation regulation manual (0,1,2,3) / automatic Width x height x depth 86 x 86 x 39 mm Note: the thermostat should be positioned approx. 1.5 m above the floor level, and not exposed to direct sun radiation or other local heat or cold source. Note: order together with PER-06-IK flush box	AZA3PER06
	PER-06-IK flush box for PER-05 and PER-06.	AZA3PER06IK
	PER-05-DO remote control for PER-05 and PER-06.	AZA3PER05DO
	QAA-32 wall-mounted temperature sensor Temperature measuring range 0 - 40 °C Measuring accuracy at 25 °C ±0.3K Time constant 6 min Electrical connections IP30 IP protection rating IP30 Width x height x depth 97 x 100x36 mm See p. 37 for a sample wiring diagram	AZA3QAA32
	QAH-11 clip-on temperature sensor with NTC resistance measuring element for the equipment with heating and/or cooling function Temperature measuring range - 20.....+ 70 °C Measuring accuracy at 25 °C ±0.3K Time constant 1.5 min	AZA3QAH11
	PAT transformer ~230/12 V 50 Hz version for surface mounting PAT-01-M-01 45 PAT-02-M-01 90 PAT-04-M-01 160 PAT-06-M-01 300 version for flush mounting PAT-01-M-02 45 PAT-02-M-02 90 PAT-04-M-02 160 PAT-06-M-02 300	power [W] power [W] AZA3PAT01M01 AZA3PAT02M01 AZA3PAT04M01 AZA3PAT06M01 AZA3PAT01M02 AZA3PAT02M02 AZA3PAT04M02 AZA3PAT06M02

Product description

trench convectors

convectors

type	width	length	height	duct composition
FMK = no fan FIT = fan version FIP = reinforced fan version	18 = 180 mm 26 = 260 mm 29 = 290 mm 34 = 340 mm 42 = 420 mm	100 = 1000 mm ... 350 = 3500 mm	09 = 90 mm 11 = 110 mm 14 = 140 mm	01 = galvanized steel (standard) 02 = galvanized steel *) 11 = stainless steel (standard) 12 = stainless steel *)

*) non-standard convectors are the ones whose dimensions differ from the ones listed in the catalogue hereby

Note:

FIT - available width only 260, 290, 340 mm (height – 90 or 140 mm)

FIP - available width only 180 or 260 mm (height – only 90 mm, length – only up to 3000 mm)

example:

Aquilo FMK convector, width 260 mm, length 1500 mm, height 90 mm, galvanized steel sheet duct, standard

FMK - **26** - **150** - **09** - **01**

convector description: **FMK 26 150 09 01**

Non-standard versions available at request.

The order execution proceeds only after the graphic design has been accepted by the Client.

type	width	length	height	duct composition
F2C = heating or cooling	24 = 240 mm	060 = 600 mm ... 180 = 1800 mm	11 = 110 mm	11 = stainless steel, standard

type	width	length	height	duct composition
F4C = heating and cooling	34 = 340 mm	125 = 1250 mm ... 275 = 2750 mm	14 = 140 mm	11 = stainless steel, standard

grilles

type	width	length	type/finish	finish/grille colour	frame finish
PMO = grille, no frame PML = grille, L-type frame PMZ = grille, Z-type frame	18 = 180 mm 24 = 240 mm 26 = 260 mm 29 = 290 mm 34 = 340 mm 42 = 420 mm	100 = 1000 mm ... 350 = 3500 mm	11 = crosswise, duralumin 21 = lengthwise, duralumin or 12 = crosswise, beech 14 = crosswise, oak or 13 = crosswise, stainless steel 23 = lengthwise, stainless steel	00 = natural 01 = golden 02 = light brown 03 = dark brown 04 = black or 00 = raw 20 = oiled 22 = varnished or 00 = natural	00 = L-type frame, natural duralumin 01 = L-type frame, golden duralumin 02 = L-type frame, light brown duralumin 03 = L-type frame, dark brown duralumin 04 = L-type frame, black duralumin 00 = Z-type frame, natural duralumin

grilles (cont.)

example 1:

grille, no frame, width 260 mm, length 1500 mm, crosswise, raw beech

PMO - 26 - 150 - 12 - 00

grille description: **PMO 26 150 12 00**

example 2:

grille, L-type frame, width 260 mm, length 1500 mm, crosswise, natural duralumin, frame: dark brown duralumin

PML - 26 - 150 - 11 - 00 - 03

grille description: **PML 26 150 11 00 03**

example 3:

grille, Z-type frame, width 260 mm, length 1500 mm, lengthwise, natural duralumin, frame: natural duralumin

PMZ - 26 - 150 - 21 - 00 - 00

grille description: **PMZ 26 150 21 00 00**

In places where intense mechanical load on the grilles might occur (car dealers, gyms), the duralumin or stainless steel grilles are recommended.

The moisture content for beech or raw oak Aquilo convector grilles is approx. 10%. To enable the Clients coloring of their own choice, the grilles are not sold protected by preliminary varnishing.

However, while stored or after mounting, raw wood grilles can naturally lengthen even with 2-3 mm per each meter of the grille's length, due to the natural process of moisture absorption from the ambient air. To avoid the adverse effects of this natural process, the grilles need to be protected against moisture. Painting with oil or varnishing eliminates the possibility of the negative effects of swelling or shrinking of the wooden grilles. In case grilles become moist, they should be varnished only after they become entirely dry and return to their required length, appropriate to the duct's dimensions.

Note:

All Aquilo convectors if you need to apply them in swimming pools must be ordered in special version. This applies to a special version of stainless steel duct as well as other specially designed pieces of equipment. In the description of the type of heater and pool grille version should be added to the type of letter B. Eg: FMKB, F1TB, F1PB or PMOB, PMLB, PMZB and further details as to the basic version. Recommended performance grille for the version pool of duralumin.

AQUILO Trench Convector - Terms of warranty

1. AQUILO trench convectors are marketed and made available pursuant to the Regulation (EU) of the European Parliament and according to the Construction Products Regulation of the European Council No. 305/2011 laying down harmonized conditions for the marketing of construction products.
2. **RETTIG HEATING Sp. z o.o. located in Rybnik, Przemysłowa Street (hereinafter referred to as the Guarantor) hereby extends, in the territory of the European Union, a 10-year warranty (from the date of purchase) for AQUILO trench convectors installed in hydronic central heating systems. The warranty applies to the trench of the heater, exchanger and grille. For other components and accessories (fans, valves, heads, transformers and controllers) a 2-year warranty is given.**
3. The warranty applies to convectors connected to closed-loop water central heating systems with diaphragm expansion vessels, with local vents (no central venting system is allowed), supplied by a heat exchanger transfer station, boiler or heat pump, made up of carbon steel, cooper or plastic tubes, with anti-diffusion barrier and installed in residential, office, service and other areas with no corrosive action of substances contained in air, and free from permanent or occasional moisture. The exception is trench convectors for use in swimming pool areas (fresh water only), for which the Guarantor also gives the warranty as in par. 2. Trench convectors can be installed in small open systems up to 25 kW, provided that approved corrosion inhibitors are used with such systems. During the term of the warranty, the convectors and their components, in which manufacturing defects are found and reported within max. 1 month from finding, will be replaced with new ones, free from defects or repaired.
4. The warranty to be valid requires:
 - a proof of purchase - invoice;
 - heater installation in water central heating system according to the national technical regulations and standards referred to;
 - having the trench convectors with fans installed in accordance with wiring diagrams by qualified workmen (with a relevant electrical license).
5. Operating pressure in the central heating system with AQUILO trench convectors may not exceed 10 bar and the maximum operating temperature 110°C. In high buildings, the system shall be divided into sections. The system shall be tested for tightness with test pressure which is 2 bar higher than the operating pressure, not lower, however, than 4 bar. The maximum test pressure for tightness test is 12 bar.
6. The warranty shall not apply to convectors:
 - installed in central heating systems to be connected to high temperature heat system with a hydro-elevator or pump mixing loop;
 - installed in swimming pool areas (except for swimming pool heater version for fresh water pool systems), car wash facilities, laundries, butcheries, public toilets, bathrooms and other areas with damaging action of corrosive substances contained in air and permanent or occasional moisture;
 - installed in a central heating system to be permanently connected to water supply system without protective equipment provided at the connection point to prevent from return flows, so called anti-contamination equipment;
 - installed in a central heating system to be emptied of water more frequently and for longer periods than stated in the essential operating requirements;
 - installed in steam systems;
 - installed in a central heating system in which the maximum levels of critical water quality indices will be exceeded:
 - the total content of chloride and sulphide ions may not exceed 150 mg/l (for cooper tubing max. 50 mg/l);
 - oxygen content may not exceed 0.1 mg/l;
 - water pH should be within the range 8.0 - 9.5;
 - general water hardness max. 4.0 mval/l.



Note! Controller programming is not covered by the warranty.

7. **The warranty shall not apply to convectors damage** resulting from misuse, storage, transport and use other than intended. This applies, in particular, to convectors:
 - stored in open air before installation;
 - with mechanical damage;
 - contaminated inside with damaging solids or fluids;
 - deformed by too high test pressure or static pressure in the system;
 - deformed as a result of system freezing.

8. **The warranty shall not cover electrical equipment damage** due to faulty wiring.
9. The convectors shall be installed with mounting boards (included in the delivery), both while pouring concrete into the space between the trench and floor and while spreading the floor finish. The mounting board shall be installed for repair works to avoid ingress of dust and damage of the convector components. To avoid excessive noise from underneath the convector, insulate the space with sound-proofing materials, such as mineral wool, low pressure fitting foam.
10. It is prohibited to drain the system of water completely and partially and to leave it in such condition. This also applies to new systems subjected to tightness tests. If it is required to empty the system, e.g. for repair, remove water only from that part of the system where it is necessary. After completion of the work, the emptied system should be refilled with water immediately. The amount of water used for filling and replenishing the central heating systems should be controlled, e.g. with a water meter.
11. The product may not be repaired or modified by the Buyer or any third parties without the Guarantor's consent, otherwise the warranty will be void.
12. In case of defects found during the warranty period, complaint procedure shall be started, by notifying the Seller with a special complaint form, giving accurate description of the defect found and all details required in the form. The Seller shall accept the complaint and send it to the Guarantor with registered mail, fax or e-mail, within 24 hours from the date of receipt. Forms with missing details, preventing the claim to be processed, will be returned by the Guarantor to complete the missing data. The form shall be appended with an invoice or its photocopy and the number of electrical license of the person responsible for electrical connection (this applies to convectors with fans). In special cases, the Guarantor may request to add photographs showing the claimed product to be added to the complaint form. The Guarantor shall reply to the complaint within 14 days from receipt, starting from the date of receiving a complete complaint form.
13. While processing the complaint, the Guarantor shall inspect the claimed product either at the installation place or in other location requested by the Guarantor. For complaints involving mechanical damage, keep the original packaging in which the heater was delivered. For accepted complaints, the Guarantor shall, within 14 days from acceptance, repair or replace free of charge the parts of the product which are found defective due to faulty workmanship or material defects. In exceptional cases (e.g. if the product should be imported from abroad for replacement), the Guarantor reserves the right to extend the processing time of an accepted complaint above the 14-day period, against prior written notice to the Client. For defects not affecting heater function, the Guarantor may also propose a relevant discount to the price. In case of complaints for products which are no longer in production, the Guarantor will offer an alternative product with corresponding specifications or propose to refund its cost at the value as of the date of purchase.
14. The Guarantor reserves the right to process the complaint at its discretion.
15. The warranty period shall be extended by the duration of the repair, starting from the date the product is delivered to the Guarantor until the day of repair, and to a replaced heater full warranty period is applied.
16. The Guarantor reserves the right to modify its products without prior notice, provided that the modifications not affect the criteria for selection of convectors.
17. These Terms of Warranty shall neither exclude, limit or suspend Buyer's rights resulting from non-compliance of the product with the contract, according to the Law of July 27, 2002 on special conditions of sale to customers and amending the Civil Code (Journal of Laws 2002, no. 141 item 1176).
18. These Terms of Warranty are valid since 01.07.2013.

notes

[illegible]

WWW.PURMO.PL

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PURMO 
clever heating solutions